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Mississippi National River and Recreation Area
Minneapolis, Minnesota



Mississippi National River and Recreation Area

Water Trail Plan



Volpe

The National Transportation Systems Center

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Mississippi River Kayakers

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Report Notes

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Definitions

ADA - Americans with Disabilities Act

AIS - Aquatic Invasive Species

ATS - Alternative Transportation System

cfs - cubic feet per second

DNR - Department of Natural Resources

FEMA - Federal Emergency Management Agency

MRT - Mississippi River Trail

NRRA - National River and Recreation Area

NPS - National Park Service

NWT - National Water Trail

RTCA - Rivers, Trails, and Conservation Assistance

TOSP - Trails and Open Space Partnership

Section One: Introduction

The U.S. Department of Interior established the Mississippi National River and Recreation Area (NRRRA) National Water Trail (NWT) in 2012 as the nation's second national water trail to encourage stewardship for, and recreational access to, one of North America's most iconic rivers. The NWT includes a 72-mile stretch of the Mississippi River in the Twin Cities' metro area and four miles of the Minnesota River containing many nationally significant historic, cultural, economic, scenic, recreational, natural, and scientific resources. Tributaries of the water trail include the Rum, Crow, St. Croix, and Vermillion Rivers, which are not part of the NWT but provide unique paddling opportunities in and of themselves.

The NWT provides access to 76 miles of paddling through a variety of urban and natural landscapes and connects State-designated wild and scenic river segments, State parks and wildlife refuges including Fort Snelling State Park and the Minnesota Valley National Wildlife Refuge, two National Scenic Byways, and numerous regional and local parks. There are a number of short and extended trip opportunities for all users and river access is provided frequently along the trail. Access points are maintained primarily by State and local governments in conjunction with the Minnesota Department of Natural Resources (DNR) and, more recently, with support from the National Park Service (NPS).





Paddling on the Mississippi River. Source: NPS

The water trail begins above river mile 879 near the confluence of the Mississippi and Crow Rivers and extends through Minneapolis and St. Paul to the confluence with the St. Croix National Scenic Riverway just south of Hastings, Minnesota, and Prescott, Wisconsin. There are opportunities for picnicking, fishing, interpretation, and land-based recreation and transportation, like using byways, bicycling, and hiking, that enable multi-modal access to the river and its many destinations.

The NPS is currently integrating the water trail into the park's alternative transportation and regional transportation systems to further increase park visitation and exploration without increasing congestion or surface parking. The goal is for visitors to be less reliant on cars and more able to seamlessly travel along the river by bike, canoe, or transit. In August 2016, the NPS installed seven first-of-a-kind paddle share stations paired with Nice Ride Minnesota bike share stations in Minneapolis to provide a paddle and bike experience along the water trail. More stations are likely to be added in the future along the entire NWT as resources become available. (See www.paddleshare.org)

All of the NRRA's recreation and alternative transportation opportunities are identified in its Mississippi River Companion (<http://www.nps.gov/miss/planyourvisit/missrivercomp.htm>) and River Trip Planner (www.rivertripplanner.org), which contain information for finding water and land-based recreational activities and destinations along the water trail as well as bike and paddle share, transit, and parks.

The purpose of this Water Trail Plan is to help the NWT become a world class, resource-based, recreation and alternative transportation experience in the Twin Cities metro area that enhances connections between the water trail, neighborhoods, and other recreation experiences. To accomplish this, this document includes a description of the process followed to develop the plan, a mission statement and goals, an assessment of existing access points and facilities, an inventory of known stretches without access points and with other needs, and concludes with a section on planned improvements and recommendations for future development and enjoyment.

Section Two: Process Followed

The NRRRA initiated the water trail planning process by asking two entities to help guide and craft the plan: NPS's River, Trails, and Conservation Assistance (RTCA), which has worked on several NWT plans across the country, and the U.S. Department of Transportation John A. Volpe National Transportation Systems Center (Volpe Center), which focused on integrating access to the NWT with current and future alternative transportation systems (ATS). Together, these three entities (the NRRRA being the third) composed the project team.

The project team then invited staff from State, regional, and local parks and other River-focused partners and stakeholders in the NRRRA to help craft guidance for the development of the water trail and the water trail plan. The project team emailed hundreds of people, many of whom are involved in the NRRRA's Trails and Open Space Partnership (TOSP), which is a regional group that meets quarterly at the NRRRA's offices to discuss ATS, trails, and other matters affecting visitors accessing and visiting the NRRRA, to garner interest in being involved in the NWT. Many people wanted to become involved. The results of the project team's first collaboration with interested stakeholders, which included staff from relevant organizations and volunteers from interested user groups, were a vision statement and a mission statement for the water trail in addition to goals for this water trail plan and for future collaboration (see Section 3).

To perform the inventory of existing conditions and hazards (see Section 4), the project team started with the maps in the 2012 version of the NRRRA's River Companion. The River Companion provides maps of the 72-mile NRRRA that contain information on water access points, amenities at these access points and at other locations along the river, hazards present along the river, and destinations and points of interest along the river. Because the Companion is four years old, the project team updated the information in three ways:

- Asked stakeholders to provide input on access points, amenities, and hazards that are not reflected in the Companion's map
- Looked for and added information on access points, amenities, and hazards listed in Department of Natural Resource's (DNR) River Guide and Minnesota Geospatial Commons
- Visited all access points along the NWT



Paddle share users at the North Mississippi Regional Park carry-in water access point. Source: NPS

Regarding this last step, the project team visited and inventoried each access point along the NWT. This inventory involved taking pictures of any boat accesses, carry-in accesses, parking lots, and other amenities (restrooms, picnic tables, etc.) present at each access point. The project team then geocoded the pictures to identify the exact location of each access point along the NWT. The project team created the maps in Appendix A based on the inventory and, using the River Trip Planner (www.rivertripplanner.org), determined what alternative transportation connections exist to each access point. These ATS connections are listed in tables in each of the five sub-sections of Section 4. The five sections of the river as demarcated in the River Companion. The project team also listed the access points and hazards in tables in each sub-section of Section 4.

At the same time, the project team solicited information from stakeholders regarding any conceptual or planned access points along the NWT. Stakeholders identified several projects, which are captured in the tables in Section 4 and are listed with more information in Section 5. Similarly, hazards are documented in Section 4 and are listed with more information and an assessment of areas that lack access points and needs in Section 6. Section 7 concludes with several recommendations based on the work and findings described in the preceding sections of the plan. Once the project team completed a draft of the plan, it presented its findings to stakeholders and asked them for their review and input.

Section Three:

Vision, Mission, and Goals

Vision Statement

“The Mississippi National River and Recreation Area National Water Trail offers a world class, resource-based, recreation and alternative transportation experience in the Twin Cities metro area that enhances connections between the water trail, neighborhoods, and other recreation experiences.”

Mission Statement

“The Mississippi National River and Recreation Area National Water Trail will incorporate planning, inventory/access, operations and maintenance elements as Goals and Areas of Emphasis in supporting the Vision.”

Goals/Areas of Emphasis

- Raise Awareness of the NWT
- Increase Participation and Activity in the NWT
- Enhance Safety and Access
- Strengthen Economic Development
- Provide Opportunities to Connect to the River
- Increase the Health of the River and its People
- Build and Sustain Partnerships

Section Four: Inventory of Existing Conditions and Hazards

The riverbanks through most of the urban Mississippi NRRA are protected for natural and recreational purposes at dozens of sites managed by local and State partners. Thirty-five of these parks provide direct water access in the form of public boat ramps (trailer access) and/or canoe launches (carry-in access).

This section of the Water Trail Plan describes current conditions along the river through the NRRA, including the public water access points, private marinas and private water access points (which public river users might be able to use in case of emergency), alternative transportation access to these points, and major river hazards present as of 2015. The tables describing water access points in this section differentiate between trailer and carry-in access points. Please note, all trailer access points are handicap accessible to the top of the ramp, which is how DNR has defined accessible. The tables indicate whether the carry-in access points are handicap accessible. Additionally, please note that all access points have no fee unless noted otherwise. The NPS' Mississippi River Companion interprets the Mississippi River through the Twin Cities region in five major sections based on unique characteristics (see Figure 1):

- The Wild and Scenic River: Ramsey to Fridley (river miles 879 to 862)
- Including confluences of the Rum and Crow Rivers
- The Urban River: Fridley through Minneapolis (862 to 851)
- The Gorge: Minnesota River Confluence (851 to 844)
- The Working River: St. Paul (844 to 832)
- The Forested Floodplain: St. Paul through Hastings (832 to 813)
- Including confluences of the St. Croix National Wild and Scenic River and the Vermillion River

In addition to these sections defined in the River Companion, the river through the NRRA can be divided into two “pools”, or stretches of rivers between dams as defined by the US Army Corps of Engineers. Pool 1 lies between St. Anthony Falls and Lock and Dam 1 near St. Paul. Pool 2 lies between Lock and Dam 1 and Lock and Dam 2 near Hastings. Traveling from one pool to the other requires an extremely difficult, undeveloped portage or a trip through the locks and creates the largest barrier to river use. The NPS encourages paddlers to portage, where possible, and boaters to trailer boats around all locks instead of going through them to prevent the spread of invasive Asian carp.

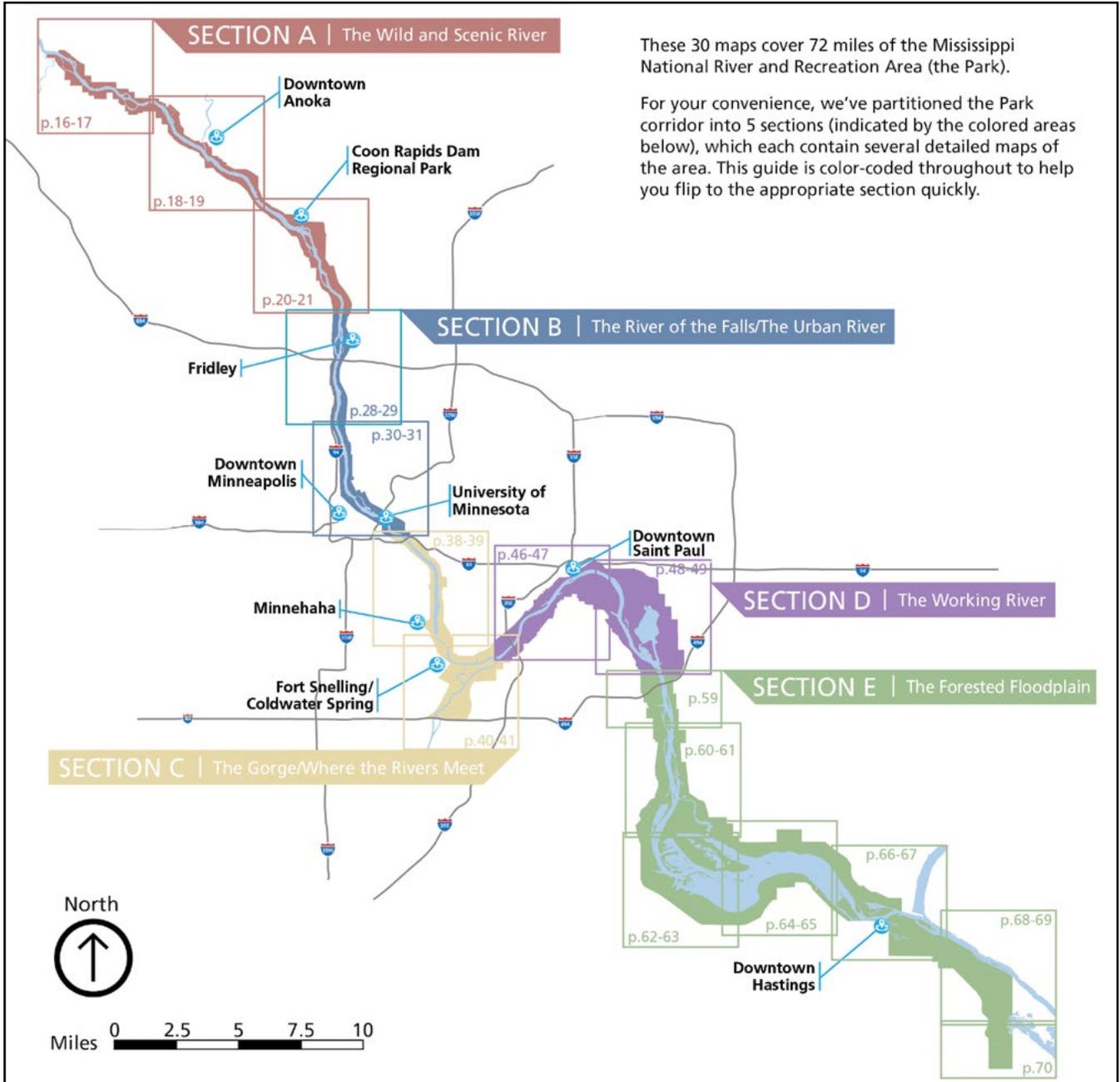


Figure 1. Sections of the Mississippi River through the Twin Cities region

The stretches of river between most of these water access points are generally calm, broad, and suited for use by recreational travelers. The U.S. Geological Survey and the National Weather Service have four automatic river level gauges in the NRRA that the DNR interprets for recreation, using real-time data that is satellite-fed to the online DNR River Level Map. By and large, the Mississippi River is suited to all users during times of moderate flows, as defined in cubic feet per second (cfs). During times of low water the river remains generally safe, but a few Class 1 (easiest to navigate as defined by the International Scale of River Difficulty) rapids begin to form as water levels above rocks and other obstacles drop. During times of exceptionally high water the river can be dangerous to all users. Regardless of the water level, the stretch from St. Paul to South St. Paul is not suited to beginners due to bridges, barges, and other obstacles in the river that create challenging currents. Discussion of each section of the river identifies specific hazards a river user may encounter.

Several important rivers and creeks flow into the Mississippi River (designated as a State Water Trail in 1963) and connect to the NWT. The tributaries are interesting destinations in and of themselves, and six of them are already managed as water trails that provide additional opportunities to connect to river destinations. These tributaries include (from north to south):

- The Crow River (designated as a State Water Trail in 1967)
- The Rum River (designated as a State Water Trail in 1967)
- Rice Creek (a local water trail)
- Minnehaha Creek (a local water trail)
- The Minnesota River (designated as a State Water Trail in 1967)
- The St. Croix National Scenic Riverway (designated as a State Water Trail in 1963 and as a Federal Wild & Scenic River in 1968)
- The Vermillion River

The Minnesota State Water Trails system, which is managed by the Minnesota DNR, is the first and largest in the nation. The DNR works with local, State, and Federal agencies to acquire, develop, and manage State Water Trail facilities (i.e. public water accesses, campsites, rest areas, and portages). Other models are used, but DNR typically helps local units of government develop water accesses, in return for the local unit agreeing to manage long-term maintenance and administration. State Water Trails receive priority, but the DNR also does the same kind of work to a lesser degree on rivers that have not been legislatively designated. The Vermillion River, Rice Creek and Minnehaha Creek also have existing infrastructure due to past collaborative efforts. NRRA actively works with the DNR and local units of government in the planning and implementation of infrastructure improvements along the Mississippi and Minnesota Rivers.

Understanding the amenities that enhance, and the barriers that detract from river, use as they exist today makes it possible to plan for increased use of the river as a water trail. This understanding, along with the continued protection of the river, will enable park managers in the NRRA to achieve a vision of the river as a connected and safe recreation opportunity for millions of Twin Cities' residents and visitors.



Fishing on the Mississippi River. Source: NPS

The Wild and Scenic River: Dayton/Ramsey to Fridley

The NRRA begins at the confluence of the Rum and Mississippi Rivers in Ramsey and Dayton. These first seventeen miles of river are characterized by farms and woods transitioning to suburban communities north of Minneapolis. The general undeveloped nature of the river has earned it a Wild and Scenic River designation from the State of Minnesota from St. Cloud to the Anoka/Champlin line. Please note that, for the purposes of this plan, this section of river extends to Fridley, south of Anoka/Champlin, in order to match the River Companion. This river is generally placid with a wide channel and no commercial but some recreational traffic. The Coon Rapids Dam is a destination itself, but is also a barrier to all river users. While non-motorized boat users can portage over the island, motor boat users face difficulty navigating through the area.

This section also faces a number of issues related to natural resource protection. Management concerns for the river include preventing the spread of Aquatic Invasive Species (AIS) and protecting stream bank vegetation. As the National Water Trail is promoted and operationalized, messages about visitor roles in protecting the resource should be considered in Communication plans, web or phone app development, to complement AIS signage at the access points.

Water Access

There are eleven existing public water access points along this section of the river and one public water access point in the conceptual planning phase. Several of these sites are highly developed suburban parks with restrooms, visitor centers, playgrounds, and other recreational facilities. This section of river is 18 miles long, with an access point about every 1.6 miles. Table 1 provides details about the public water access points.

Name	City	Management Entity	River Bank	Launch Type	River Mile	Hours/Fees	Amenities	Map
Crow/Dayton River Public Access	Dayton	MN DNR	Right	Trailer	879.5	24 hours	Portable toilet, handicap parking and restroom	A16
Daytonport Highway Rest Area	Ramsey	Minnesota DOT	Left	Carry-In	878.7	Unknown	Restrooms, ample parking, grills, picnic area, water	A16
Mississippi West Regional Park	Ramsey	Anoka County	Left	Trailer	875.8	6am to 30 minutes past sunset; \$5 per vehicle per day	Restroom, picnic areas, trails	A17
Mississippi River Community Park	Anoka	City of Anoka	Left	Carry-In	873.5	Unknown	Fishing dock, grills, restrooms, picnic area, four shelters, trails, sports facilities, drinking water	A18
Akin Riverside Park	Anoka	City of Anoka	Left	Trailer	n/a (off-river)	6am-11pm unless posted otherwise	Boat access, picnic area, shelter, fishing, restrooms	A18
Peninsula Point Two Rivers Historical Park	Anoka	City of Anoka	Left	Carry-In	871.6	Not available for public use from mid-October to mid-April	Docking facility, cookers, nature walk, picnic area, pavilion, restrooms, shelter, trails, drinking water, ample parking, playground	A18
Mississippi Point Park	Champlin	Champlin	Right	Trailer	871	7am-10pm	Shore fishing, picnic area, restrooms	A19
Coon Rapids Dam (East) Regional Park	Coon Rapids	Anoka County	Left	Trailer	866.4	6am to 30 minutes past sunset; gated, \$5/ vehicle/day or \$25/vehicle/year annually	Visitor center with bathrooms, exhibits, and meeting space; bait & tackle; bike rental & trails; shore fishing; fishing pier (Cenaiko Lake); picnic area; picnic shelters (reservations); restrooms; drinking water	A20
Coon Rapids Dam (West) Regional Park	Brooklyn Park	Three Rivers Park District	Right	Carry-In	866.1	5am – 10pm	Fishing dock, picnic area, visitor center (with bathrooms, exhibits, and meeting space), west side accessible using the Coon Rapids Dam walkway from the east side	A20
Riverview Heights Park	Fridley	Anoka County	Left	Carry-In	863.5	8am – 10pm	Trails, picnic tables	A21
River Park	Brooklyn Park	Brooklyn Park	Right	Trailer	863	6am-10pm	Restrooms, picnic area and picnic shelter, ball fields, playground, river and prairie trails, restrooms, drinking water	A21

Table 1. Public Water Access in the Wild and Scenic River Section

Alternative Transportation

This section of the river includes two Alternative Transportation Gateways: Downtown Anoka, located at East Main Street and 3rd Avenue in Anoka, and Coon Rapids Dam (East) Regional Park, located at the Visitor Center at the Regional Park. Coon Rapids Dam (West) Regional Park is also accessible by bus. However, transit access to this portion of the river is generally difficult. Although several bus lines and the Northstar Commuter Rail line pass by the river, few bus stops or transit stations are within comfortable walking distance. Service is generally tailored to daily commuters at peak times in the peak direction and is less useful or nonexistent on weekends.

Trail access to the river is better than transit access; the Mississippi River Trail (MRT) or local trails are within less than 0.5 miles of all the water access points. The MRT has several on-road sections that may be uncomfortable to many people riding bicycles, but trail construction currently underway will help to minimize these. Other than the MRT, dedicated bicycle infrastructure, such as bike lanes, is limited in the communities north of Minneapolis. There are plans for MRT and dedicated bicycle infrastructure expansion in the area in the next few years. Table 2 shows the alternative transportation access to each water access point.

The Northstar is a high quality commuter rail line and the most visible transit service in the Wild and Scenic stretch of river. However, the commuter rail is targeted at the peak direction, peak time commuter market and its schedule is not always useful for tourists or recreational travelers. The trains run infrequently during the middle of the day and remain in downtown Minneapolis between the morning and the evening commute. There are, however, weekend runs that may be useful to visitors with bicycles, which are welcome on the train. Table 2 details the access to transit and trails for the water access points on the Wild and Scenic section of the river.



Name	River Mile	Distance from Water Access Point to ATS Facilities
Crow/Mississippi Confluence	879.5	On-road MRT = 0.1 miles No transit
Daytonport Rest Area	878.7	Off-road MRT = 1 mile No transit
Mississippi West Regional Park	875.8	Off-road MRT = 1 mile; direct regional trail connection No transit
Mississippi River Community Park	873.5	On/off road MRT = 0.5 miles No transit
Akin Riverside Park	n/a (off-river)	On/off road MRT = 0.1 miles Local transit = 0.3 miles <i>Bus Route: #805, to Coon Rapids and Blaine, hourly weekdays and Saturdays</i>
Peninsula Point Two Rivers Historical Park	871.6	Off-road MRT = 0.3 miles Local transit = 0.5 miles <i>Bus Route: #766 Express, Minneapolis to Anoka, rush hour and some midday/evening, no weekend service</i>
Mississippi Point Park	871	On-road MRT = 0.1 miles Local transit = 0.3 miles <i>Bus Route: #766 Express, Minneapolis to Anoka, rush hour and some midday/evening, no weekend service</i>
Coon Rapids Dam (East)	866.4	Off-road MRT = 0.1 miles Local transit = 0.5 miles <i>Bus Route: #852 (along Coon Rapids Blvd), Minneapolis to Anoka, hourly week days and Saturday</i>
Coon Rapids Dam (West)	866.1	Off-road MRT < 0.3 miles; direct regional trail connection Local transit < 0.3 miles <i>Bus Route: #766 Express, Minneapolis to Anoka, rush hour and some midday/evening, no weekend service</i>
Riverview Heights Park	863.5	Off-road MRT = 0.1 miles Local transit < 0.5 miles <i>Bus Route: #852 (along East River Road), Minneapolis to Anoka, hourly week days and Saturday</i>
River Park	863	Off-road MRT = 0.5 miles Local transit < 0.5 miles <i>Bus Route: #766 Express (along West River Road), Minneapolis to Anoka, rush hour and some midday/evening, no weekend service</i>

Table 2. Alternative Transportation in the Wild and Scenic River Section

Hazards

Although this section has high quality and accessible water access points, they are separated by dams, rapids, and bridge piers. The most dangerous area is the short stretch of river between the Upper and Lower St. Anthony Falls and the associated Upper and Lower St. Anthony Falls dams. No river access exists between these dams, and paddlers must portage 1.5 miles in a highly urbanized area around this stretch.

Congress closed the Upper St. Anthony lock in 2015 to prevent the spread of invasive carp. This closure is permanent. The NPS encourages boaters to trailer motor boats around all locks instead of going through them. The Lower St. Anthony Lock is open from 10am to 8pm daily. The DNR has issued a suggested portage route that shows the most direct route for people with non-motorized crafts (i.e., canoes and kayaks) to travel overland around the closure. As shown in Figure 2, they are directed to exit the river at Flagpole Plaza, portage for a mile and a half, and then reenter the river at Bohemian Flats. However, the Army Corps of Engineers, the DNR, and the Minneapolis Park and Recreation Board are working on moving the end of the portage to be just below Upper St. Anthony lock at River Mile 854, thereby reducing the portage distance by two-thirds (about one mile). This change is scheduled to be in place later in 2016 or early 2017.

Name	River Mile	Type	Map
Foster to Cloquet Islands rapids	875.7	Class I rapids during low water levels	A17
Foster to Cloquet Islands rocks	875.7	Obstacles	A17
Foster Island rocks	875.5	Obstacles	A17
Ferry Street / 169 Bridge	871.8	Bridge piers	A18
Coon Rapids Dam pool motorboats	866.5	Challenging stretch, caution required in motorboat launch area	A20
Coon Rapids Dam	866.1	Barrier	A20
Coon Rapids Dam rocks	866.1	Obstacles	A20
Coon Rapids Dam rapids	866	Class I or II rapids during low water levels	A20
Minnesota 610 Bridge	865	Bridge piers	A21
Minnesota 610 Bridge to Banfill Island piers	864.5	Obstacles	A21
South Breckenridge Island rapids	863.5	Class I rapids during low water levels	A21

Table 3. Hazards in the Wild and Scenic River Section



Paddling near Boom Island. Source: NPS

The Urban River: Fridley to Minneapolis

The stretch of river from Fridley through Minneapolis is one of the more densely populated and most easily accessible. It is near the homes of hundreds of thousands of local residents, including many underserved communities. At the same time, it is the major hub of transportation and tourism in the region with museums, arenas, arts venues, and attractive neighborhoods adjacent to the river corridor. A 3.9 mile stretch of the Urban River is also host to the initial roll-out of Mississippi River Paddle Share, a self-serve paddle share program aligned with Nice Ride Minnesota bike share stations. Traffic on the river is quiet upstream of the St. Anthony Falls due to the 2015 closure of the lock to navigation to prevent the spread of Asian Carp, an aquatic invasive species. Recreation travel is common in Pool 1, the stretch of river from the downstream side of the St. Anthony Falls to Lock and Dam No. 1. River travelers seeking more consistently natural surroundings may wish to consider other portions of the river, but the ease of access and combination of natural and urban views make this a unique segment of the water trail in the region.

Water Access

This section of river is about 11 miles long and is the most densely developed section of the Mississippi NRRRA, with ten water access points, about one every 1.1 miles. The public water access points are on both sides of the river and are evenly spaced through the urban core of Minneapolis as shown in Table 4. Note that there are no access points between Upper and Lower St. Anthony Falls. Many of the access points in this stretch of the river are in regional and local parks with numerous facilities for both comfort and recreation. Water access is generally very good, but parking may be limited on busy summer days at some sites, especially for vehicles with boat trailers. Most of the access points feature active programming, especially during the summer. The North Mississippi Regional Park is especially well-developed and features the Carl Kroening Interpretive Center, a year-round visitor center with multilingual exhibits and activities. Table 4 provides details about the public water access points and Table 5 provides details about the private water access points, which river users may be able to use in case of emergency.

Name	City	Management Entity	River Bank	Launch Type	River Mile	Hours/Fees	Amenities	Map
Manomin Park/ Banfil Locke Center for the Arts	Fridley	Anoka County	Left	Carry-In	862	6am to 30 minutes past sunset	Picnic area, fishing/viewing platform, restrooms, MRT trail, drinking water	B28
Islands of Peace	Fridley	Anoka County	Left	Carry-In	861	6am to 30 minutes past sunset	Picnic area, MRT trail with accessible paved spur trail to river's edge	B28
Anoka County Riverfront Regional Park	Fridley	Anoka County	Left	Trailer	860.3	6am to 30 minutes past sunset	Handicap accessible, picnic areas, restrooms, MRT trail, drinking water, boat launch	B28
Carl Kroening Interpretive Center (North Mississippi Regional Park)	Minneapolis	Minneapolis Park and Rec Board	Right	Carry-In	858.4	6am - 10 pm	Visitor center with restrooms, trails, paddle share station, bike share station	B29
North Mississippi Regional Park (Camden Bridge)	Minneapolis	Minneapolis Park and Rec Board	Right	Trailer	857.7	6am - 10pm daily	Floating fishing pier, restroom, trail, drinking water along trail, picnic area, playground, electric charging station	B30
Mississippi Watershed Management Organization (MWMO)	Minneapolis	MWMO	Right	Carry-In	856.3	8am - 4:30pm	Trash cans, benches, amphitheater, bike share station, paddle share station	B30
Bassett Creek	Minneapolis	Minneapolis Park and Rec Board	Right	Carry-In	854.9	6am - 10pm	Limited metered parking, trails, picnic area, playground	B31
Boom Island	Minneapolis	Minneapolis Park and Rec Board	Left	Trailer	854.8	6am - 10pm	Fishing platform, temporary docking facility, parking (fee), picnic area, picnic shelter, restrooms, drinking water, bike share station, paddle share return station	B31
Flagpole Plaza	Minneapolis	Minneapolis Park and Rec Board	Right	Carry-Out	854.2	Unknown	Limited metered parking and stairs to flagpole plaza, take-out only	B31
Bohemian Flats	Minneapolis	Minneapolis Park and Rec Board	Right	Existing carry-in, planned Trailer Launch	853	6am - 10pm	Canoe and kayak racks, parking (fee), picnic area, restroom, walking paths, shelter, commercial river cruises, paddle share station, bike share station	B31

Table 4. Public Water Access in the Urban River Section

Name	River Bank	River Mile	Phone Number	Notes	Map
East River Flats (Minneapolis Park and Rec Board)	Left	852.5	612-230-6400	Parking (fee), picnic area, restroom, walking paths	B31

Table 5. Private Marinas and Access Points in the Urban River Section

Alternative Transportation

This stretch of river is a comfortable walking distance from frequent, all-day transit access to many parts of Twin Cities region. This stretch is also a hub for the regional trail network, including long stretches of the MRT on dedicated right of way. Three Alternative Transportation Gateways are located along this section of the river: Fridley, located at East River Road and 61 ½ Way NE in Fridley; Downtown Minneapolis, located at Chicago Avenue and S 4th Street; and University of Minnesota, located at SE Washington Avenue and S. Harvard Street on campus. Other local trails and on-street dedicated bicycle infrastructure provide many opportunities for access and recreation. One water access point is within sight of a Nice Ride bike share station, and several others are within walking distance. Downtown Minneapolis has the densest concentration of Nice Ride stations with stations every few blocks. The West Fridley Northstar Station is adjacent to the MRT and is only ½ mile from the river access at Islands of Peace Park, which has an accessible trail down to the edge of the water. Table 6 below shows proximate trails and transit services to water access points.

Rail transit carries riders to points north, east, and south via the Northstar commuter rail and the green and blue light rail lines respectively. As stated in the section on the Wild and Scenic River, Northstar service is infrequent and geared to commuters. However, the two light rail lines provide all-day frequent service, including on the weekends. Several water access points in downtown Minneapolis are walkable from light rail stations. Transit riders who combine their trip with a bike can easily get from most stations to most water access points along this stretch.



Name	River Mile	Distance from Water Access Point to ATS Facilities
Manomin Park/ Banfil Locke Center for the Arts	862	Off-road MRT = 0.1 miles Local transit = 0.1 miles <i>Bus Route: #852 (along East River Road), Minneapolis to Anoka, hourly week days and Saturday</i>
Islands of Peace	861	Off-road MRT = 0.1 miles Local transit = 0.3 miles <i>Bus Route: #852 (along East River Road), Minneapolis to Anoka, hourly week days and Saturday, Northstar train (Route #888) runs every half hour during rush hour weekdays with 3 train stops on weekends</i>
Anoka County Riverfront Regional Park	860.3	Off-road MRT crosses between parking lot and boat ramp Local transit = 0.5 miles <i>Bus Route: #852 (along East River Road at Georgetown Apartments), Minneapolis to Anoka, hourly week days and Saturday</i>
Carl Kroening Interpretive Center (North Mississippi Regional Park)	858.4	Off-road MRT < 0.1 miles Local transit < 0.3 miles <i>Bus Route: #761 (Brooklyn Park to Minneapolis), only during rush hour</i>
North Mississippi Regional Park (Camden Bridge)	857.7	Trails, with bridge access to east, on and off road MRT = 0.1 miles Bus = 0.3 miles <i>Bus Routes: #22, #32, and #762 run frequently</i>
Mississippi Watershed Management Organization (MWMO)	856.3	Off-road MRT < 0.1 miles Local transit < 0.1 miles <i>Bus Routes: #11 (Columbia Heights to South Minneapolis) and #32 (Robbinsdale to Rosedale), frequent</i>
Bassett Creek	854.9	On-road MRT = 0.1 miles Local transit < 0.3 miles <i>Bus Route: #7 (North Minneapolis to 46th St Station), frequent</i>
Boom Island	854.8	Already has bike share, on-road bike infrastructure, MRT Local transit < 0.5 miles <i>Bus Route: #11 (Columbia Heights to South Minneapolis), frequent</i>
Flagpole Plaza	854.2	On-road bike infrastructure, off-road MRT Local transit < 0.25 miles <i>Bus Routes: #4, #6, #11, #61, #141, #552, #553, #824 run frequently</i>
Bohemian Flats	853	Off road MRT < 0.1 miles Local transit < 0.5 miles <i>Bus Routes: University of Minnesota Circulators Metro Transit Green Line access within 0.5 miles</i>

Table 6. Alternative Transportation in the Urban River Section

Hazards

Although this section has high quality and accessible water access points, they are separated by dams, rapids, and bridge piers. The most dangerous area is the short stretch of river between the Upper and Lower St. Anthony Falls and the associated Upper and Lower St. Anthony Falls dams. No river access exists between these dams, and paddlers must portage 1.5 miles in a highly urbanized area around this stretch.

Congress closed the Upper St. Anthony lock in 2015 to prevent the spread of invasive carp. This closure is permanent. The NPS encourages boaters to trailer motor boats around all locks instead of going through them. The Lower St. Anthony Lock is open from 10am to 8pm daily. The DNR has issued a suggested portage route that shows the most direct route for people with non-motorized crafts (i.e., canoes and kayaks) to travel overland around the closure. As shown in Figure 2, they are directed to exit the river at Flagpole Plaza, portage for a mile and a half, and then reenter the river at Bohemian Flats. However, the Army Corps of Engineers, the DNR, and the Minneapolis Park and Recreation Board are working on moving the end of the portage to be just below Upper St. Anthony lock at River Mile 854, thereby reducing the portage distance by two-thirds (about one mile). This change is scheduled to be in place later in 2016 or early 2017. Outside of this stretch, the minor hazards in this segment of the river are numerous bridge piers extending into the water (Table 7), which create obstacles and eddies around which to navigate.

Name	River Mile	Type	Map
Durham Island Rapids	861	Small rapids (unclassified) to the left of the island	B28
I-694 Bridge Piers	860.5	Bridge piers	B28
Camden Bridge	857.7	Bridge piers	B30
Lowry Avenue Bridge	856.4	Bridge piers	B30
Broadway Avenue Bridge	855.5	Bridge piers	B31
8th Avenue Bridge	855	Bridge piers	B31
Central Avenue Bridge	854.3	Bridge piers	B31
Upper St Anthony Falls	854	Barrier	B31
10th Avenue Bridge	853.5	Bridge piers	B31
Lower St Anthony Falls	853.4	Barrier	B31
Washington Avenue Bridge	852.7	Bridge piers	B31
I-94 Bridge	851.7	Bridge piers	C38
Shortline Bridge	850.6	Bridge piers	C38
Lake Street Bridge	849.8	Bridge piers	C38

Table 7. Hazards in the Urban River Section



Figure 2. Portage Route around Upper St. Anthony Falls.



Canoeing near the bluffs. Source: NPS

The Gorge: Minnehaha to Fort Snelling State Park Section

This section of the river leaves the urban core of Minneapolis and joins with the Minnesota River amongst forests and undeveloped islands. Most of the riverbank here is protected by its steep bluffs, within regional parks, Fort Snelling State Park, and the Minnesota Valley National Wildlife Refuge. The same bluffs that protected the river from development sometimes make recreation access difficult, but in several areas roads provide access down to the river. This stretch is a prime venue for river travelers seeking wildlife and a wilderness-like feel between the urban downtowns of Minneapolis and St. Paul. Farther away from the river are major destinations including the Minneapolis – St. Paul International Airport, Historic Fort Snelling, and the Mall of America.

Water Access

There are three water access points useful to river travelers in this section of the river. It is the shortest section of river in the Mississippi NRRRA at only 7 miles long, meaning it has an access point approximately every 2.3 miles. The Picnic Island access point is located on the Minnesota River about one and a half miles upstream of the confluence with the Mississippi River, but provides useful access for motorboats. Table 8 provides details about the public water access points and Table 9 provides details about the private water access points, which river users may be able to use in case of emergency.

Name	City	Management Entity	River Bank	Launch Type	River Mile	Hours/Fees	Amenities	Map
Meeker Island Lock & Dam Park & Ruins	St. Paul	St. Paul	Left	Carry-In	850.5	Sunrise to sunset	Picnic tables, river views, historic lock ruins	C38
Hidden Falls Regional Park	St. Paul	St. Paul	Left	Trailer	846.5	Hidden Falls South: Sunrise to 9pm North: Sunrise to 10pm	Grills, two fire rings, picnic area, restrooms, trails, drinking water	C40
Fort Snelling State Park (Picnic Island)	St. Paul	MN DNR	Right	Trailer	845.3	8am - 10pm	Minnesota State Park vehicle permit required, picnic tables, restrooms, trails	C40

Table 8. Public Water Access in The Gorge Section

Name	River Bank	River Mile	Phone Number	Notes	Map
Minneapolis Rowing Club	Right	850	(612) 729-1541	Private boat houses and shore launch for rowing club members and emergency watercraft	C38
Watergate Marina	Left	845	(651) 695-3780	Protected concrete slab ramp (fee), courtesy dock, fuel (gas & diesel), pumpouts, restrooms, full service & parts, transient slips by reservation, slip rental, ship's store, towing, land storage, drinking water & ice, laundry, showers	C40

Table 9. Private Marinas and Access Points in The Gorge Section



Paddling past the Meeker Lock Wall in high water. Source: NPS

Alternative Transportation

Transit in this region of the metropolitan area is relatively high quality, but the densest settlement patterns with the best transit service lie far from water access points. The highest quality transit traveling through the Gorge is the Blue Line light rail line, which provides frequent service between downtown Minneapolis and the Mall of America. None of the stations are within easy walking distance of water access points, but they do provide good access to major river-related tourist destinations. A few commuter-oriented buses provide service near the river, but the schedules are limited and are less useful for tourists. The Mississippi NRRRA planned and proposed a shuttle for visitors that connects many popular river-related destinations, but none of the stops are directly adjacent to water access points. The shuttle has yet to be funded. Furthermore, two Alternative Transportation Gateways are located in this section of the river: Minnehaha, located at East Minnehaha Parkway and Hiawatha Avenue, and Fort Snelling/Coldwater Spring, located at Minnehaha Avenue and Federal Drive.

Trail access is excellent, with long and unbroken stretches of the MRT through most of this stretch of the river. Other local trails are present, but on-street dedicated bicycle infrastructure is lacking outside of the city of Minneapolis. Users can reach several water access points by transit and trails as shown in Table 10 below, although the gorge creates relatively steep slopes that will challenge people walking and biking. The Nice Ride bike share system has several stations in the area, typically located near trails, transit, and safe on-street bicycling routes. This makes relatively short trips from one site to another, such as from Fort Snelling State Park to Coldwater Spring, relatively easy.

Name	River Mile	Distance from Water Access Point to ATS Facilities
Meeker Island Lock & Dam Park & Ruins	850.5	Off-road MRT = 0 mile Local transit = 0.5 miles <i>Bus Routes: #21A (Marshall Ave and Otis Ave), frequent</i>
Hidden Falls Regional Park	846.5	Off-road MRT = 0 mile, at bottom of bluffs Local transit < 0.3 miles <i>Bus Route: #852 (along East River Road), Minneapolis to Anoka, hourly week days and Saturday, Northstar train (Route #888) runs every half hour during rush hour weekdays with 3 train stops on weekends</i>
Fort Snelling State Park (Picnic Island)	845.3	Off-river, 1.5 miles from MRT Local transit > 5 miles

Table 10. Alternative Transportation in The Gorge Section

Hazards

The major hazard in this part of the river is the Lock and Dam Number 1, a historic facility next to Minnehaha Regional Park – a very large Minneapolis park. The lock is still operating and is open to recreational travel from 10am to 8pm daily. River travelers should plan for delays and be familiar with lock procedures. The NPS encourages paddlers to portage, where possible, and boaters to trailer boats around all locks instead of going through them because going through the locks could contribute to the spread of invasive carp. Please note, there is no portage around Lock and Dam Number 1 because developing one would be costly and challenging due to the steep topography. Past the lock is a somewhat complex section of river with channels, Pike Island, and the confluence with the Minnesota River (mile 318). These lesser hazards may confuse some novice river travelers, but this stretch of river is generally easy to navigate. As with other river segments, bridge structures require water travelers to be alert and familiar with both riverine right of way and be able to maneuver their craft. Table 11 details the hazards in this stretch of the river.

Name	River Mile	Type	Map
Meeker Lock ruins	850.5	Submerged ruins	C38
Ford Parkway Bridge	847.8	Bridge piers	C39
Lock and Dam Number 1 (no portage)	847.7	Barrier	C39
Highway 5 Bridge	845.6	Bridge piers	C40
I-35 Bridge	843.2	Bridge piers	C40

Table 11. Hazard in The Gorge Section



Kayaking through St. Paul. Source: NPS

The Working River: St. Paul Section

As the river approaches St. Paul, it retains many industrial and commercial uses that are no longer seen in Minneapolis. Downstream travelers pass through a transition from relatively undeveloped natural areas and parks to suburbs to an urban downtown, all in a relatively short span of the river. Recreational travelers here should expect to encounter occasionally heavy barge traffic in downtown St. Paul.

Water Access

There are only two public water access points in over 12 miles of river (mile 844 to mile 832), as shown in Table 12 below. Harriet Island is a high quality urban park with many amenities. However, the lack of convenient access points means that it provides limited options for novice paddlers to do anything beyond a trip from Lilydale Regional Park to Harriet Island, as the distance between Harriet Island and City of South St. Paul Public Water Access is almost 8 miles. Table 12 provides details about the public water access points and Table 13 provides details about the private water access point, which river users may be able to use in case of emergency.

Name	City	Management Entity	River Bank	Launch Type	River Mile	Hours/Fees	Amenities	Map
Lilydale Regional Park	Lilydale	St. Paul	Right	Trailer	842.1	Sunrise to 10 pm, unless otherwise posted	Vehicle and boat/ trailer parking, hiking, biking, restroom	D47
Harriet Island Regional Park/Kelly's Landing	St. Paul	St. Paul	Right	Carry-In	840.1	Unknown	Temporary docking facilities at the public dock during park hours (6am-11pm), food, nearby lodging, picnicking, restrooms, trail, drinking water	D46

Table 12. Public Water Access Points in The Working River Section

Name	River Bank	River Mile	Phone Number	Notes	Map
St. Paul Yacht Club	Right	840.2, 839.5	(651) 292-8964	Gas dock (24/7) pay at the pump, life jacket loaner station, temporary dockage, ice, mechanical services, pop machine, pumpouts, restrooms, travel lift, drinking water	D46

Table 13. Private Marinas and Access Points in The Working River Section

Alternative Transportation

This section of the river has one Alternative Transportation Gateway located in Downtown St. Paul at Union Station Depot. Transit access in this stretch of river is good, with frequent all-day bus service available in many parts as well as light rail to Minneapolis. Harriet Island is within walking distance of two bus lines and is about a mile from light rail and intercity Amtrak service as shown in Table 14. It is also served by the MRT and local trails and hosts a bike share station. The MRT provides a contiguous off-street route along most of this stretch of river and connects with local trails and on-street dedicated bicycle infrastructure. Nice Ride has a dense network in downtown St. Paul, and the station at Harriet Island is within walking distance of river access.

The Green Line light rail line connects St. Paul and Minneapolis. It is a high quality and frequent transit service, but it takes a direct route through the city between the two cities and does not directly serve any water access points.

Name	River Mile	Distance from Water Access Point to ATS Facilities
Lilydale Regional Park	842.1	Trails, off road MRT < 0.3 miles Local transit > 1 mile
Harriet Island Regional Park/ Kelley's Landing	840.1	Off-road MRT < 0.3 miles Local transit < 1 mile <i>Bus routes: #62 (Shoreview to St. Paul), frequent and #75 (St. Paul to Inver Grove Heights), weekdays Metro Transit Green Line and Amtrak access within 1 mile</i>

Table 14. Alternative Transportation in The Working River Section

Hazards

The major hazards through this section are the lack of water access and shelter, as well as barge traffic. There is only one public water access point in downtown St. Paul. After passing this point, there is no easy place to seek shelter or leave the river for about eight miles. The barge traffic through this portion of the river helps illustrate the past and current importance of river transportation to the region, but is also a hazard. Recreational users unfamiliar with riverine rights of way or inexperienced in maneuvering may find travel through St. Paul difficult. Stationary hazards include bridge piers, pilings, and their related currents. Table 15 below lists each of these hazards.

Name	River Mile	Type	Map
Railroad bridge	839	Bridge piers/current	D46
St. Paul to I-494 Bridge lack of water access	840 to 832.5	Potentially challenging stretch/no shelter	D46 -E59
High Bridge	840.5	Bridge piers	D46
Downtown St. Paul barge traffic	840 through end of NRRRA	Challenging stretch/wake	D46
Robert Street Bridge and Raspberry Island	839.5	Island and bridge piers	D46
St. Paul Lift Bridge	839.4	Bridge piers	D46
Lafayette Road Bridge	838.7	Bridge piers/current	D46

Table 15. Hazards in The Working River Section



Undeveloped areas of the Mississippi NNRA. Source: NPS

The Forested Floodplain: St. Paul to Hastings Section

South of St. Paul, the river continues as industrial before returning to a quieter and less developed stretch. Here the river is broad, with backwater channels, some industry, steep bluffs, and many islands. The banks are forests, farms, and wetlands until the river reaches the town of Hastings and its confluence with the Lower St. Croix River National Scenic Riverway. Additionally, the Vermillion River flows through the pristine and undeveloped Gores Pool Wildlife Management Area.

Water Access

At about 19 miles, this is the longest stretch of river in the Mississippi NRRRA, with nine water access points, about one every 2.1 miles. Despite ample access opportunities ranging from suburban parks to minimally developed boat launches, as listed in Table 16, there are two significant stretches without access. There is no access between Harriet Island and the I-494 Bridge, an almost eight mile stretch, and a more than nine mile gap in access points exists between the Lions Levee Park in South St. Paul and the Spring Lake Park Reserve in Rosemount. Both these stretches could pose an issue for less experienced river travelers who would prefer a shorter paddle. Please note, there is a water access point at Grey Cloud, near mile 823, between Lions Levee Park and Spring Lake Park Reserve, but river users would need to paddle through Baldwin and Mooers Lake to access it since they cannot portage or pass under the road crossing Grey Cloud Channel (river mile 27.6) (see Appendix A). The Public Boat Launch in Prescott is the final water access point before leaving the NRRRA. Table 16 provides details about the public water access points and Table 17 provides details about several private water access points in this section of the river, which river users may be able to use in case of emergency.

Name	City	Management Entity	River Bank	Launch Type	River Mile	Hours/Fees	Amenities	Map
City of South St. Paul Public Water Access	South St. Paul	South St. Paul	Right	Trailer	832.3	24 hours	Loaner life jackets, benches, views, parking, handicap accessible portable toilet and floating platform	E59
City of Newport Public Water Access	Newport	Newport	Left	Carry-In	832.1	Unknown		E59
Lions Levee Park	St. Paul Park	St. Paul Park	Left	Trailer	829.7	4am - 11pm	Two concrete ramps, trailer parking, shore fishing, grills, picnic area, portable chemical toilet, life jacket loaner station, handicap accessible parking and bridge to island	E60
Grey Cloud	Cottage Grove		Left	Carry-In	823	Unknown		E62
Spring Lake Reserve	Hastings	MN DNR	Right	Trailer	820.5	8am - 10pm (12am in Summer)	Electric charging station, use caution - minimally maintained road (need 4 wheel drive) and stump field - small watercraft only. Watch out for river debris on ramp.	E65
Hasting Public Dock	Hastings	Hastings	Right	Docking Facility	814.2	Unknown	150 feet in length and 8 feet wide, maximum of 4 hours docking	E67
Lake Rebecca Park	Hastings	Hastings and MN DNR	n/a	Trailer	814	5am -10pm	Multiple water access points, picnic area, restrooms, hiking	E67
Hastings River Flats Park/ Jaycee Park	Hastings	Hastings	Right	Trailer	814	Hastings: 6am - 10pm Jaycee: 8am - 10pm	Multiple water access points, picnic area, bathrooms, hiking	E67
Prescott, WI Public Access	Prescott, WI	Prescott, WI	Left	Trailer	811.3	Fee applies		E67

Table 16. Public Water Access in the Forested Floodplain Section

Name	River Bank	River Mile	Phone Number	Notes	Map
Twin Cities Marina	Right	830	(651) 455-9111	Full mechanical service, restrooms, restaurant, showers, service (repairs & parts), ship's store, slip rental	E59
Castaways Marina	Right	830.9	(612) 275-1900	Transient docking with reservation, slips 40' to 90', rentals available	E59
River Heights Marina	Right	830.9	(651) 455-4974	Life jacket loaner station, temporary dockage, fuel, laundry facility, pumpouts, slab ramp (fee), slip rental, restrooms, restaurant, repairs	E59
Hidden Harbor Marina	Left	829.5	(651) 321-3862	Annual & transient docks & storage, fuel & convenience store, pumpout, haul out & launch, full service, restrooms, restaurant, banquet room	E60
River Grove Harbor	Right	826.2	(651) 455-6273	Slip rental	E61
Captains Bay Marina	Left	814.2	(612) 308-5783	18 slips, winter storage, haul out	E67
Hub's Landing	Left	813.9	(651) 437-6186	Transient slips, overnight parking, pumpout, restrooms, ship's store, store & launch	E67
Hastings Marina	Right	813.1	(651) 437-9621	Fuel, pumpouts, restrooms, showers, snacks, water & pop	E67
Leo's Landing	Left	811.4	(715) 262-5998	Temporary dockage, fuel, full service marina, pumpouts, restrooms	E67
Point St. Croix Marina/ Miss-Croix Yacht Harbor	Left	811.2	(715) 262-5202	Fuel, pumpouts, 35 ton travel lift, boat repair, snacks, beverages	E67

Table 17. Private Marinas and Access Points in the Forested Floodplain Section



Alternative Transportation

Transit bus routes serve some of the communities along this stretch of river, but service is far from river sites and eventually ends as the river leaves Metro Transit’s service area. Trails are more developed, although there is a long on-road segment of the MRT between Inver Grove Heights and Hastings. On road bicycling in this area is made difficult by the lack of dedicated bicycle infrastructure and a sparse road network, including an 18 mile gap between bridges that cross the river. However, planning is underway on new segments of the MRT to reduce and ultimately close this gap. Construction to close a 3.75 mile gap in Rosemount is planned for 2017 and 2018. Hastings, which has an Alternative Transportation Gateway, currently features a small local bike share system that is useful for reaching the river and traveling throughout the town. The transit and trail connections to water access points are shared in Table 18.

Name	River Mile	Distance from Water Access Point to ATS Facilities
City of South St. Paul Public Water Access	832.3	Off-road MRT = 0 mile ----- Local transit (Newport Transit System) < 1 mile <i>Bus Route: #71 (Little Canada to St. Paul), frequent</i>
City of Newport Public Water Access	832.1	Off-road MRT = 0 mile ----- Local transit (Newport Transit System) < 0.5 mile <i>Bus Route: #364 (Newport to St. Paul), rush hour</i>
Lions Levee Park	829.7	Signed bike route nearby; on-road MRT < 1 mile; bike racks ----- Local transit = 0.5 miles <i>Bus Route: #364 Express (St. Paul to St. Paul Park), rush hour</i>
Spring Lake Park - West (Buds Landing)	822	Current on-road MRT almost 1 mile away (Off-road MRT after construction is finished.)
Spring Lake	820.5	Current on-road MRT almost 1 mile away (Off-road MRT >1 mile after construction is finished.)
Hastings Public Dock	814.2	Bike trail to Hastings and on-road MRT (1/4 mile), proximate to Hasting’s bike share system, restored prairie and connects to MRT via the sand levee dam across from Lock and Dam.
Lake Rebecca Park	814	Bike trail to Hastings and on-road MRT (1/4 mile), proximate to Hasting’s bike share system, restored prairie and connects to MRT via the sand levee dam across from Lock and Dam.
Hastings River Flats Park/ Jaycee Park	814	Bike trail to Hastings and on-road MRT (1/4 mile), proximate to Hasting's bike share system, restored prairie and connects to MRT via the sand levee dam across from Lock and Dam.
Prescott	811.3	On-road MRT > 0.5 mile

Table 18. Alternative Transportation in The Forested Floodplain Section

Hazards

This is the most complex portion of the river in the Twin Cities region and may be confusing to river travelers who have not been to it before. Some commercial traffic traveling to and from St. Paul is present but is typically traveling through the main river channel. Recreational traffic in this area is heavier than other sections of the river due to many popular marinas and motorized boat launches. There are two hazards associated with bridges. The Spring Lake area conceals an underwater stump field that is particularly hazardous to motorboats at times of low water. The lake is also a wide and open stretch of water that can produce winds and waves of which boaters need to be wary. While the many backwater channels and islands can provide outstanding wildlife viewing, they can also make navigation challenging. Finally, the Lock and Dam No. 2 requires travelers to travel through the locks and be familiar with lock procedures. For paddlers wishing to reduce the potential for passage of aquatic invasive species, two portages and Lake Rebecca provide a passage alternative to using the lock. Table 19 lists these hazards.

Name	River Mile	Type	Map
Wing dams	836.5-806	Obstacles	D48-E69
North of I-494 Bridge sand bars	833	Obstacles	E59
I-494 Bridge	832.5	Bridge piers	E59
Swing Bridge currents	830	Class I rapids	E60
Spring Lake Park tree stumps	822.2 – 819.9	Challenging stretch	E62- E64
Lock and Dam No. 2	812.8	Barrier	E66
Highway 61 Bridge	813.9	Bridge piers	E61
Vermillion River low water conditions (seasonal)	808	Low water conditions later in the season, plans to close challenging dams on several channels	E69

Table 19. Hazards in The Forest Floodplain Section

Section Five: Future Water Access Projects

NRRA partners will implement several water access improvements over the next several years. The list of projects below are those that are currently under construction, design, or have received serious planning consideration as of early 2016. Not all are guaranteed to be implemented, but each project has the potential to improve access and the experience of water recreation and travel through the NRRA.



- Stephen's Farm Park Master Plan (River Mile 875.5): The City of Dayton has recently master planned the Stephen's Farm Park, which is located along the west side of the river, directly adjacent to Cloquet Overlook. A new carry-in boat access point, seasonal docks, a fishing pier, and other site improvements are planned.
- City of Champlin Parks Improvements (River Mile 871): The City of Champlin's Mississippi Commons area encompasses four parks, two of which are directly adjacent to or are "on" the Mississippi River. In an overall master planning process and with a separate reconstruction project through Champlin of Trunk Highway 169, Mississippi Point and D.C. Chandler parks are proposed to be renovated with many new additions. These will include trails and an access tunnel that will connect the east and west sides of Highway 169, allowing park patrons and trail users to access the River parks without crossing the highway. Other amenities will include an adjacent restaurant site to Mississippi Point Park and docks that would allow to the river for recreation. The project plans to also add recreational features including a performance area, picnic shelter, indoor rental space, and potentially activities such as kayaking and canoeing in the Elm Creek. The city recently completed the lead project for the Mississippi Commons area, the Elm Creek Dam reconstruction project. The city is now finalizing plans to move forward with the Highway 169 project in 2017/18, in which the park projects are proposed to follow.
- Improved Coon Rapids Dam Portage Route (866.4): Paddlers who reach the Coon Rapids Dam must portage on the Anoka County side if their trip carries them beyond the dam. Convenient access points above and below the dam exist today, but the route between the two is not immediately obvious. The proposed project to sign, shorten, and improve the portage route is a simple way to improve connectivity around the dam. The new portage route will start on Dunn Island, then follow an existing access road over to the downstream side. This would have the benefit of separating motorized users from paddle users.
- Three Rivers Park District Improvements at Coon Rapids Dam (West) Regional Park (River Mile 866.1): In addition to Anoka County's portage improvements, the Park District is planning some major improvements on the west side of the dam, including a destination paddle center. A master planning effort is currently underway and is considering new or improved boat access, additional educational opportunities, and an expanded land trail system. The Park District has also expressed interest in placing a Paddle Share station at this location.
- River Park Improvements (River Mile 863): The City of Brooklyn Park and Three Rivers Park District proposed redevelopments to River Park that include connecting the West Mississippi Regional trail to River Park from 81st street into the park and then return to the Regional Trail at 83rd street. The redevelopment also includes improvements to make a better connection to the river with shoreline restoration, shore fishing, an overlook to the river, and a water access (exit only) point. This redevelopment will likely occur in 2019.
- Islands of the Peace Regional Park Improvements (River Mile 861): Islands of Peace is a treasured park nestled along the river near dense a residential area and less than half a mile from the Fridley Northstar station. Improvements to the park include development of a non-motorized boat launch on Chases Island and reconstruction of the trails and parking lot. An additional river access point in a densely populated area will help provide equitable access to the NRRA. Redevelopment of the park will improve visitor experience and make for a much more enjoyable experience.

- Upper Harbor Terminal (River Mile 857): The City of Minneapolis and Minneapolis Park and Recreation Board are collaborating on the redevelopment of Upper Harbor Terminal, located between Lowry Avenue and Camden bridges. Owned by the city, the site is more than 48 acres. The partners will work to transform it from a barge shipping terminal to parks, public access, and private development.
- Sheridan Memorial Park and East Bank Trail (River Mile 855.5): The East Bank Trail is nearing completion and is already being used by the public. Minneapolis Park and Recreation Board is beginning community engagement on the Sheridan Memorial Park development. Sheridan currently has very natural stone steps along the shoreline. Neither have handrails or are accessible in accordance with the American with Disabilities Act (ADA).
- Hall's Island (River Mile 855): Minneapolis Park and Recreation Board is planning to develop a formerly industrial riverfront property into parkland. The plans involve re-creating Hall's Island by creating a channel between the park and Hall's Island. The site will feature access for river users, restored habitats and ecological function on the Island and mainland, watercraft rental and storage, a café pavilion, and spaces for programmed events. Permits for the project are currently being reviewed.
- New Upper St. Anthony Portage (River Mile 854): A new non-motorized portage that starts directly above Upper St. Anthony Falls lock will make portaging around the closed locks shorter and simpler. This project will make traveling through the hazardous downtown Minneapolis portion of the Urban River segment safer by reducing the distance of the portage route. The proposed portage route would pass by a new NPS-staffed visitor center that is at the former U.S. Army Corps of Engineers facility at Upper St. Anthony Falls Lock and Dam. The Visitor Center, which opened in 2016, is open during the summer season only. The proposed portage route ends just below the Upper St. Anthony Falls lock.





Fishing near a lock. Source: NPS

- New Lock and Dam 1 Portage (River Mile 853.8): The topography of the Gorge makes this area extremely challenging to design and build a portage trail. However, options must be explored partly because the lock is only open from 10:00 am to 8:00 pm daily.
- New Bohemian Flats Boat Ramp (River Mile 853): Bohemian Flats is a popular waterfront park in the Urban River segment of the river in downtown Minneapolis. Today it hosts riverboat tours, provides dock space, and is a paddling access point. A project to install a boat ramp for motorboats has been proposed for the near future. This boat ramp would fill a gap in the system of motorized access points and would be the first after St. Anthony Falls.
- Hidden Falls Regional Park (River Mile 847): St. Paul's Great River Passage Master Plan also calls for two additional canoe/kayak landing areas in Hidden Falls Regional Park, as well as improvements to the existing boat ramp.
- Future access point at the Holman Field Floatplane Harbor (River Mile 838): This location was identified as a good site for new water access in the Great River Passage Master Plan, and it remains a future development goal. The site would provide an additional access point towards the urban core of St. Paul.
- Battle Creek Regional Park/ Pigs Eye Lake (not on River): There is a conceptual plan for developing a water access point in northwest quadrant of Pig's Eye Lake. The plans include development of trails and nature viewing areas.
- City of Newport Land Acquisition (River Mile 831): The City of Newport received a Federal Emergency Management Agency (FEMA) grant to acquire three homes on the existing levee on Newport Island. The grant period runs through November 2018. The City is working with representatives of the island to discuss acquisition and park development, which could include water access.

- Heritage Village Park (River Mile 831): The City of Inver Grove Heights adopted a Master Plan for the future development of Heritage Village Park and has been in the process of acquiring property and cleaning up environmental contamination over the past several years. The City's vision for the park includes acquisition of approximately 80 acres of land adjacent to the Mississippi River which will be transformed into passive recreation uses which include picnicking, shelters, restroom facilities, trails, playgrounds, natural areas, and parking. Dakota County has already constructed a portion of the MRT through the park. According to the city, the Master Plan for Heritage Village Park will take years to implement and will eventually help support planned redevelopment of commercial, industrial, and residential spaces in the immediate area.
- Spring Lake Park Reserve (River Mile 822.5): Dakota County and Minnesota DNR plan on relocating the existing water access point to Bud's Landing, located west of the existing point at approximately river mile 822. The partners are currently conducting a study to finalize the development concept and will plan on moving forward with design and construction within three to five years. The improvement will include additional features for recreation and programming.
- Upgraded Spring Lake Access Point (River Mile 822): An existing non-motorized launch at Spring Lake in the Forested Floodplain section of the river is currently favored by hunters and fishers, but is infrequently used and difficult to access. The site is undeveloped and at the bottom of a steep and difficult dirt road, but will soon be upgraded with a rehabilitated road and new facilities. The site will maintain its current rustic feel, but will make access to one of the most natural stretches of river easier and more welcoming.
- New Downtown Hastings Access Point (River Mile 814): The Hudson-Sprayer factory in downtown Hastings is vacant and planning is underway to reuse the site. A water access point associated with the redevelopment project has been discussed, but no decision has been reached. This site would likely be a small non-motorized access point with additional public waterfront amenities. If built, it would become the new southernmost public water access point in the NRRRA.

Section Six: Hazards and Needs

The Mississippi River through the Twin Cities today is a high quality recreational resource enjoyed by many paddlers and motor boat users, but hazards, both real and perceived, can limit or deter the number of people that participate in river recreation. Gaps between river access points may limit itinerary options for people who are unable to dedicate a more than a few hours to recreation. When taking into account time for transportation and other logistical consideration, shorter routes (up to 5 or 6 miles) work well for users who only have a few hours to spend on the river. Furthermore, these areas may make it difficult to leave the river in case of inclement weather, such as strong winds, or emergencies.

As shown in the to-scale schematic in Figure 3, there are three stretches that lack a water access point for more than five miles:

- Harriet Island Regional Park to South St. Paul: 7.8 miles
- Between Lion's Levee and Spring Lake Park: 9.2 miles
- Spring Lake Park Reserve to Hastings Public Dock: 6.3 miles

The Minnesota DNR targets ten miles as the maximum distance between water access points, meaning that the Mississippi River National Water Trail is already compliant with the State standard. Creating additional access points such as those discussed in Section Five above, or negotiating public use at existing private access points can provide more itinerary options and improve both recreation and safety. The next section discusses additional improvements.

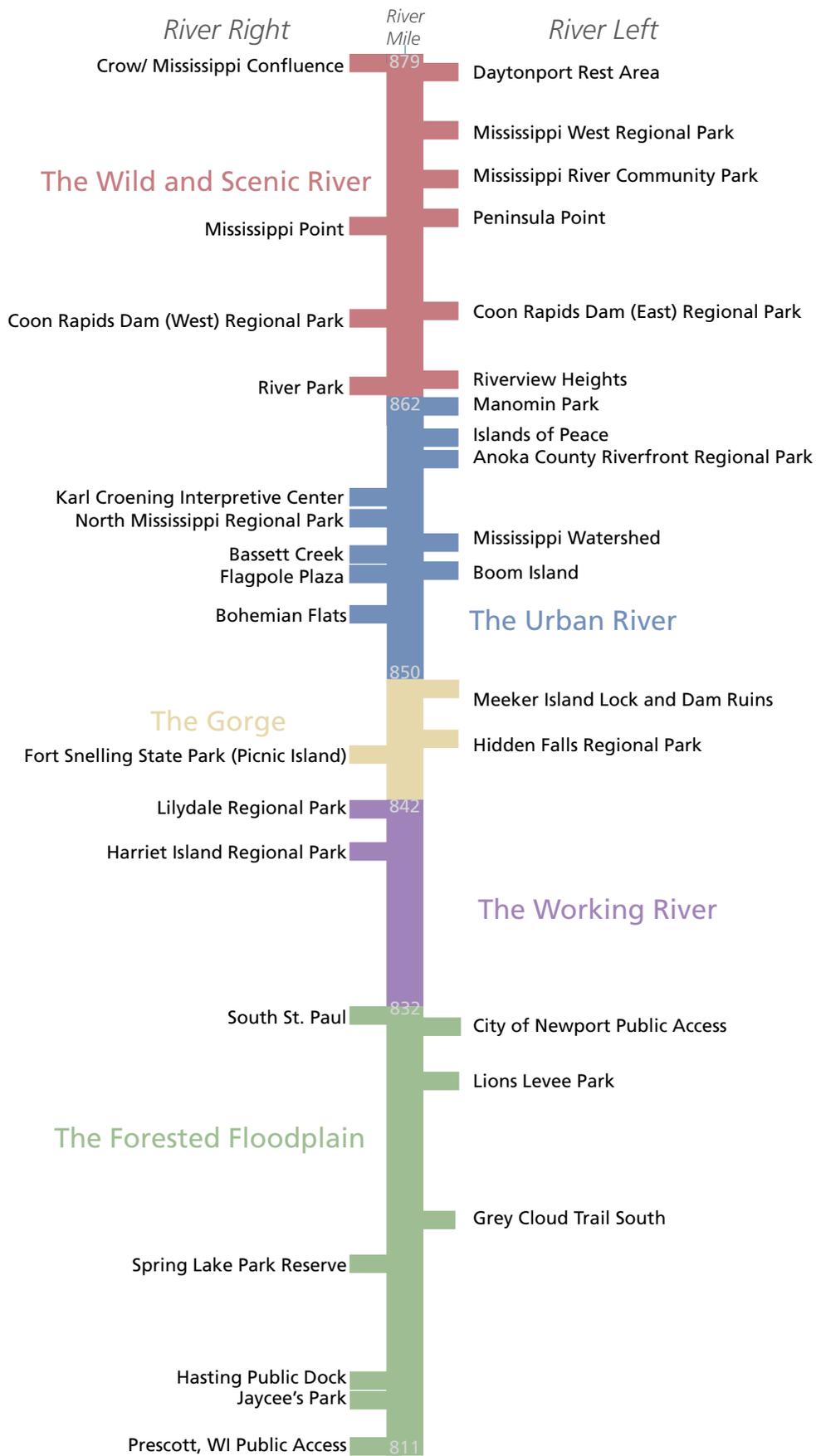


Figure 3. Spacing of Water Access Points.

Section Seven: Improvements and Recommendations

A person today could travel down the Mississippi River National Water Trail and have a great experience, but improvements can enhance that experience by making it easier, safer, and more accessible to a wider audience. This plan has already presented the improvements likely to happen in the Section 5: Future Projects section above. The recommendations presented here include general improvements that can be taken to enhance the visibility and accessibility of the water trail.

Visibility

Communications and Media Strategy

While the river runs through a population center of over 3 million people, many people are not aware of how to get on the river, especially via public transportation or how and where to launch boats, particularly canoes and kayaks. A marketing campaign is needed to increase that awareness, one that utilizes existing channels such as the NRRA, DNR, and Great River Road websites. To encourage greater diversity in participation, outreach to media and non-profits that connect with different cultural groups is also needed. This work would be in conjunction with promotion of guided trip planning in which new users are brought onto the trail with an experienced guide.



Signage and Branding

Care should be taken when placing signage on the river itself; much of its appeal is presenting a natural recreation experience in the heart of a metro region. Existing river signage is generally limited to major hazards such as the dams where large orange flashes of color alert river travelers of an upcoming hazard. On-river signage that would be appropriate would be a simple and unique combination of color and shape (such as a green triangle) that can briefly draw the eye to a water access point. This kind of signage makes it easy to spot a point where a water trail user can pull off the river to rest or to end their journey.

A land-side signage plan is currently being implemented along the water trail that places consistent branding at water access points. Such signage could include a logo created specifically for the Mississippi NRRRA NWT. NRRRA will work on this plan with the DNR, which already has signage standards for the Mississippi River State Water Trail. Practically speaking, this makes it clear where a person is able and permitted to launch a boat. More aspirationally, it unifies the disparate water access points managed by a collection of partners into a National Water Trail. Signs have been installed along the river to identify the launches, take-outs, and turn-around points for some of the paddle share stations in Minneapolis. More signs will be installed as possible as new paddle share stations are installed.

The same branding, including the to-be-developed logo, should be applied in all printed and web materials relevant to the water trail. These documents, whether published by the park or by partners such as the DNR, are valuable tools to help visitors learn about the NRRRA and how to navigate it.

Water Trail App

An app or mobile website could be a useful tool for both planning a trip and for getting information while traveling the river. NRRRA visitors are currently served by Ranger on Call and River Trip Planner, along with more general apps such as Google and Apple Maps. The NRRRA's website is also accessible to visitors with mobile devices. All of these are useful when planning general trips, but are not river-trail specific. The River Trip Planner could be expanded upon or adapted into a water trail specific version to serve water trail users the same way that it currently serves travelers using transit and land trails to navigate the area. Water access points are present on the map as icons, which distinguish between trailer accesses (that accommodate both motorized and non-motorized watercraft) and carry-in accesses (that accommodate only non-motorized watercraft). However, an app or mobile website could also provide more information about the access, including directions on how to get there and the amenities available on site.

Alternative Transportation Connections

The Twin Cities metro region has access to a wide variety of transportation options, including many that do not require ownership of a private car. As a national park, Mississippi NRRA visitors have access to these options generally, but there are often gaps in suburban areas that make accessing the river unpleasant or impossible. Good alternative transportation connections can also enable trips and activities that are not possible with a private car, such as taking a bus to rent paddlecraft, traveling downstream, then taking a bike share bicycle to travel back to the starting point or a totally new destination.

Transit Improvements

Most of the water access points are within a quarter or half mile of local bus stops, illustrating that infrastructure for improving connections to alternative transportation from the water trail is in place. Some are also near light and commuter rail stations. However, the majority of the transit stops within walking distance of the water access points do not receive weekend service, when the water trail is busiest. Partner discussions with Metro Transit can help identify which lines have the most potential for expanded weekend service.

The NRRA and its partners planned a shuttle service but did not receive funding for connecting several river-adjacent destinations such as the Minnesota Valley National Wildlife Refuge, Historic Fort Snelling, Ft. Snelling State Park, Minnehaha Regional Park, and Coldwater Springs. While only the State park has direct river access, the proposed service would serve as a land-side complement for this portion of the water trail. For more information see the Confluence Area Shuttle Plan, available in the National Transportation Library. The NPS intends to eventually reapply for funding for the shuttle.

In addition to talking with Metro Transit, partners should assess the walkability and bikeability between water access points and nearby transit stops. Such a process would include cataloging whether or not ADA-accessible sidewalks, ramps, and paths exist between the water access points and transit stops. Sidewalks are generally present leading to urban and suburban parks, but may not be fully accessible to people with disabilities. Finally, improving the comfort level of the transit stops can also encourage ridership. All but two of the transit stops within a quarter of a mile of the water access points do not have bus shelters and some do not have signs. Assessing which transit stops could add bus shelters and signage would increase comfort for riders, and should be prioritized based on park visitation and transit ridership.



Biking along the Mississippi River Trail. Source: NPS

Bicycling and Walking Improvements

Trails separated from vehicle traffic

Improved conditions for people walking and bicycling will encourage more people to leave their car at home when visiting the NRR and make it easier for people without cars to visit as well. The majority of the water access points are within a half of a mile of off-road MRT facilities. However, gaps exist at the northern and southern ends of the water trail. Most off-road paths in the urban and suburban areas connect directly to their host community's sidewalk network, but paths in rural areas typically do not. Many suburban neighborhoods near the river lack a complete sidewalk network, including gaps between transit stops and the river.

At the northernmost end, the Crow/Mississippi Confluence water access point is adjacent to on-road MRT facilities on the west bank of the river, but users would have to travel 18 miles to Coon Rapids Dam (West) Regional Park to reach off-road facilities on the west side of the river. Extending the off-road facilities north of Coon Rapids Dam (West) Regional Park on the west bank of the river would increase access to safe, comfortable bicycling and walking facilities along this stretch of the water trail. Off-road facilities are available on the east bank of the river, but users would need to travel at least a mile to reach these from the Daytonport Rest Area and Mississippi West Regional Park water access points.

Three Rivers Park District is currently pursuing an extension of the West Mississippi River Regional Trail that would build off-road facilities from the confluence of the Crow and Mississippi Rivers through Dayton and Champlin and connect to the off-road trail adjacent to West River Road in Brooklyn Park. Plans are currently focusing on identifying trailhead locations. Completion of this project would address the existing gap in off-road facilities, thus increasing safety and comfort for users.

Furthermore, generally the off-road path sections of the MRT are signed where they intersect other paths, but in some cases, such as on Minneapolis Park and Recreation Board land, they are not which may misdirect people walking or bicycling. Addressing these signage issues could help provide clarity for users and encourage further use.

At the southern end of the Water Trail, trail users do not have access to off-road MRT facilities south of Swing Bridge Park, which includes six water access points (Lions Levee Park through Jaycee Park/Lake Rebecca Park, a gap of 19 miles by bicycle). Furthermore, the MRT on-road facilities are about a mile and a half away from the Spring Lake access points under construction. However, local off-road trails exist near Jaycee Park and provide local access. Ensuring that the local off-road trails connect to the MRT would increase the comfort and safety for users.

Winter trail use

Trails that are popular with bicyclists and pedestrians during the spring, summer, and fall become quieter during the winter. Some of the most popular trails are plowed and accessible year-round, especially those used by commuters closer to the urban cores of the region. However, most trails along the river are either groomed or allowed to accumulate snow and ice. During the winter, visitors to the NRR can use these trails for snowshoeing, cross country skiing, fat biking, and other winter sports. Visitation to river destinations generally declines during the winter, but the season also provides a variety of different activities for visitors. Similar to trails, visitors can recreate on the river itself. Winter activities include snowshoeing, cross country skiing, ski touring, snowmobiling, and ice fishing. For activities on the river, visitors should always use caution in areas where water is moving quickly below the ice, where obstacles are present, and near the south side of obstacles that protrude out of the water because these conditions can create dangerously thin ice.





Paddle Share on the Mississippi (see next page). Source: NPS

On-street dedicated bicycle infrastructure

Minneapolis is well-regarded for its bicycle-friendly street infrastructure. The City of Minneapolis has over a hundred miles of on-street bicycle lanes that connect to nearly a hundred miles of trails, including the MRT. Although not comfortable for all bicyclists, these bike lanes make city bicycling less intimidating and more accessible to a wider audience. Bike lanes are present in most residential neighborhoods including several that extend directly to the river and the MRT. St. Paul has also developed some on-street dedicated bicycle infrastructure, including routes that lead to the river and the MRT. Work is underway in both communities to improve low-stress bicycling through infrastructure such as bicycle boulevards and separated bike lanes that can provide an experience similar to off-street trails. Many of these facilities also make walking safer and more comfortable by creating refuge islands to help crossing the street, reducing the number of traffic lanes to cross, or diverting vehicle traffic away from designated bicycle routes.

Beyond these two cities, bicycle infrastructure is limited to off-street trails, some on-street bike lanes, low-volume roads, and high volume roads with wide shoulders. In these areas, the MRT itself mostly travels on designated, lower-stress roadways in places where building a trail is not yet feasible. In several cases the MRT travels on busier and high speed roads when required by a sparse street network. Typically the on-street section of the MRT is signed at intersections for easier wayfinding, but there are some gaps in signage.

Bicycling is popular in the greater Twin Cities region, but the lack of off-street dedicated bicycle infrastructure outside of Minneapolis and St. Paul limits the audience to those who are comfortable sharing the road and those capable of driving or taking transit to a bike path. Installing more off-street dedicated bicycle infrastructure throughout the region will create a safer, more comfortable network for bicyclists.

Paddle/Bike share

The Nice Ride bike share system is a popular program that allows people to make short-term bike rentals from automated docking stations placed across Minneapolis and St. Paul. It makes it easy for tourists and commuters to have a bike when they need one or to combine modes of transportation during their journey. The NPS and its partners recently launched a similar self-serve kayak rental system that follows this model. The paddle/bike share system installed in 2016 has been very successful and has improved river travel convenience and broadened the audience of people able to participate in river and land-based recreation.

The paddle share system has a rack of kayaks at several different river access points. Users are able to travel to one site, rent a kayak, enjoy a trip down the river (and/or up the river, depending on current and wind direction), return the boat at a return station, and then take a Nice Ride bicycle back to their place of origin, eliminating the need for a shuttle or a second vehicle. The NPS worked with partners in 2016 to install and operate paddle share stations at four locations (Figure 4). All are adjacent to Nice Ride bike share stations in the urban core of the metro area. Safety and operational questions were addressed before the pilot project was implemented. The goal is to install paddle share stations along various sections of the NWT that meet criteria, which the NPS and Volpe Center developed, for a safe, scenic, and enjoyable paddling experience. The full roll-out of the paddle share program will take several years, similar to the introduction of new bike share systems.



Figure 4. Map of Paddleshare locations. Source: Paddleshare.org

Camping

Currently there are no opportunities for general camping along the river inside the NRRRA boundary; this represents a 100-mile gap on the Mississippi River. This gap far exceeds the Minnesota DNR's goal of having a campground at least every ten miles along a water trail. Demand for camping along the river exists today, evidenced by the long-distance and through paddlers who find unsanctioned camping spots on islands and sand bars. There is one campground at Fort Snelling State Park that allows camping by youth groups by special permit. A broader audience for camping will likely grow as the water trail increases in popularity, and the Minnesota DNR is interested in developing sanctioned campsites within the NRRRA. The DNR hopes to build and open up to four campsites, each with wilderness latrines, within the next few years, which would expand the variety of activities available to water trail users and make the journey easier for through paddlers traveling down a long stretch or even the entire Mississippi River. The DNR is prioritizing sites in the northern section of the MNNRA and is currently working to identify specific locations. In addition, Dakota County is considering developing campgrounds at Spring Lake Park Reserve after the site's master plan is updated in 2018/2019.

Outfitters

Outfitters provide a key service on the Mississippi River by getting people out on the river to enjoy the water trail. Outfitters provide both motorized and non-motorized access to the River. For first time visitors and paddlers, outfitters are particularly helpful in orienting visitors to the river, including to its scenery and hazards, and making visitors feel safe. In fact, the NPS requires that to use the paddle share system, users must have experience kayaking, and if they do not, the paddle share program's website lists several area outfitters that visitors can contact to provide a good first-time experience.

Appendix B provides a list of outfitters who currently provide service along portions of the Mississippi National River and Recreation Area Water Trail. This list can be updated as the NPS identifies new/other outfitters along the water trail. In general, the NPS believes that there is an underserved need for outfitters to rent boats, shuttle people, and offer tours in the region.

Appendix A: Maps

United States Department of the Interior
National Park Service



Mississippi National River and Recreation Area

Mississippi River Companion - Map Legend

BOATING

- Daymark: Navigation markers that include the river mile and usually a light. As with buoys, green marks the left bank when you travel upstream. The left bank is often called the "west bank," even where the river does not run north to south. Red marks the right bank, often called the "east bank."
- Power line: Lines do not pose a danger to boats, but they are helpful navigation landmarks.
- Wing dam: Rock and brush structure built to focus the river current into the 9-foot channel. Called a closing dam where it blocks a channel or slough. It is often just below the water surface and can damage a boat's hull and propeller.
- River mile marker and mid-channel sailing line: A point on a map in the 9-foot mid-channel sailing line used for navigation. They mark the distance from the confluence of the Mississippi and Ohio rivers, near Alton, Ill., so the numbers increase as you travel upstream. Each river mile number notes the location of a place on the map (for example, river mile 849.3 W is a point on the west bank).

BOATING

- Boat ramp
- Marina
- Dam
- Canoe access
- Stump field
- Rocks, currents, or rapids

TRANSIT

- Central Corridor Light Rail Transit (LRT)
- Hiawatha Light Rail Transit (LRT)
- Northstar Commuter Rail Line
- River-Bound Bus Route & Stop
- Freight railroad tracks
- Nice Ride Station
- Park and Ride
- HOV3+ Station
- HOV2+ Station
- Transit Center

POINTS OF INTEREST

- Alternative Transportation Node (a location offering access to park destinations without a car)
- Point of interest
- Boating shop, club, or rental
- Bike shop or rental
- Scenic overlook

PARKS & AMENITIES

- Mississippi National River and Recreation Area
- State, Regional or Local Park
- Parking
- Drinking Water
- Visitor Center
- Picnic Area
- Fishing pier
- Restrooms
- National Park Service Facility

TRAILS

- On-Road Bike Lane
- Bike and Pedestrian Trail (paved)
- Bike and Pedestrian Trail Combined (unpaved)
- Pedestrian Only (paved)
- Pedestrian Only (unpaved)
- Mississippi River Trail
- Grand Rounds Scenic Byway
- Great River Road Scenic Byway

Mississippi River Companion - Map A16 (river mile 879 to 878)



River Mile	Latitude	Longitude
879	N 45.245280	W 93.511099
878	N 45.235580	W 93.497436

North ↑

Mississippi River Companion - Map A17 (river miles 877 to 875)



Please note: MRT has new alignment on the east side of the river.

1 mile

River Mile	Latitude	Longitude
877	N 45.225306	W 93.483919
876	N 45.224420	W 93.464029
875	N 45.217261	W 93.446878

North ↑

Mississippi River Companion - Map A18 (river miles 874 to 872)



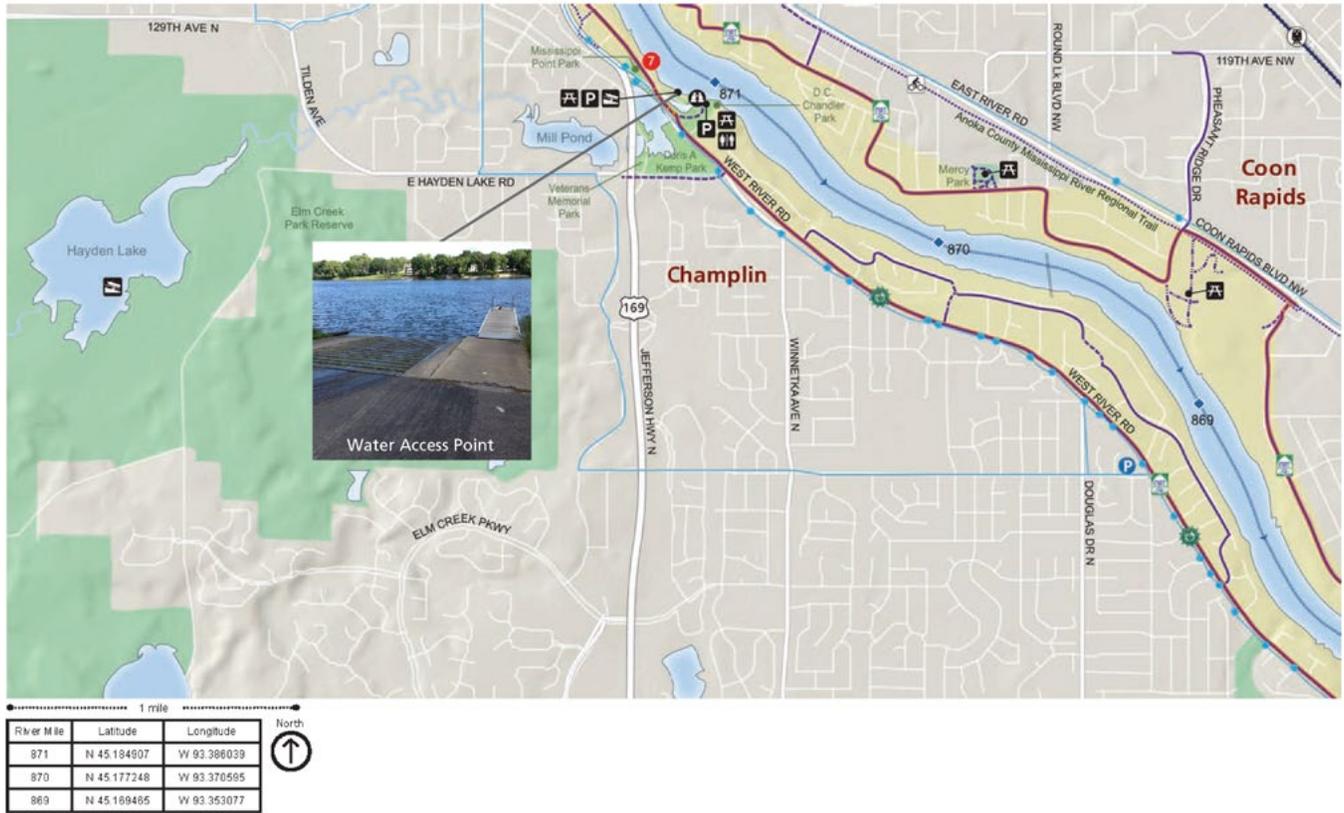
Please note: MRT has new alignment on the east side of the river.

1 mile

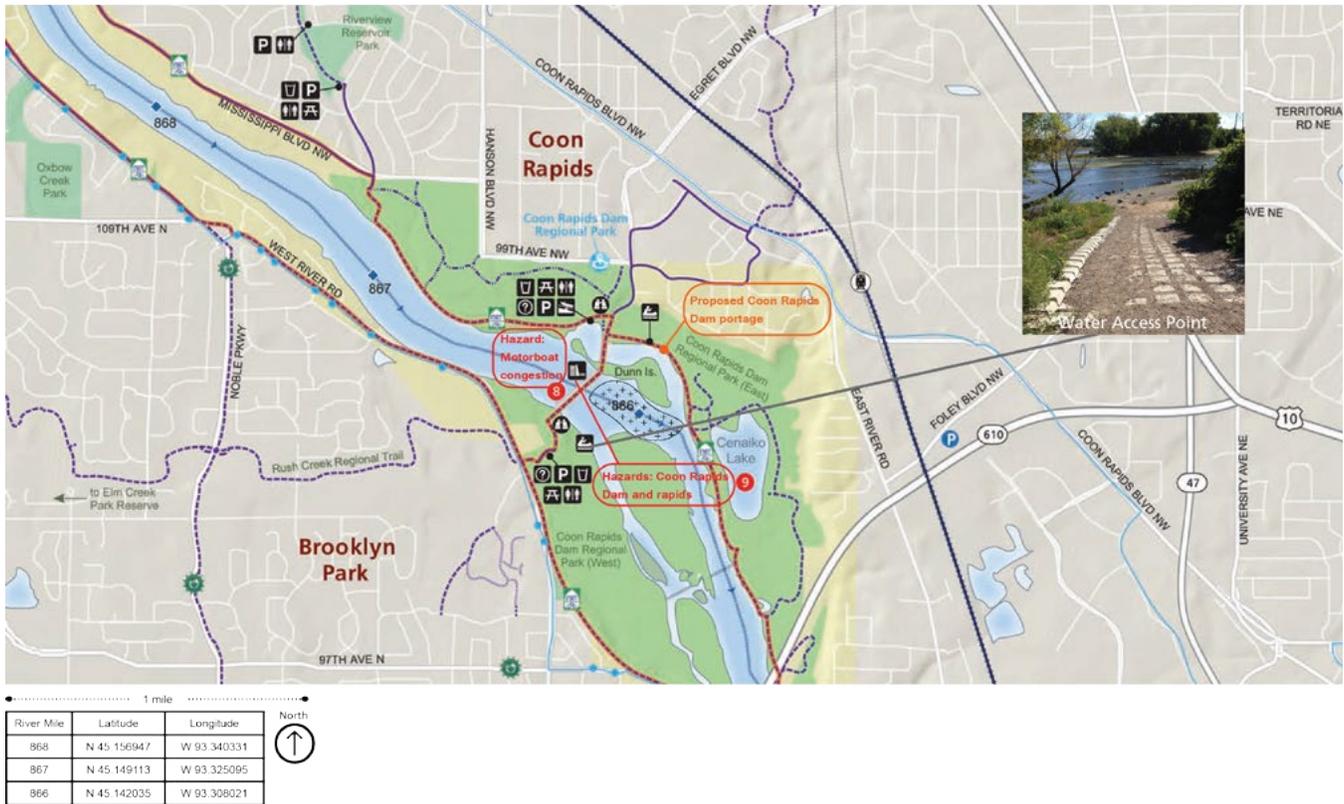
River Mile	Latitude	Longitude
874	N 45.215399	W 93.427325
873	N 45.203093	W 93.416843
872	N 45.193844	W 93.401768

North ↑

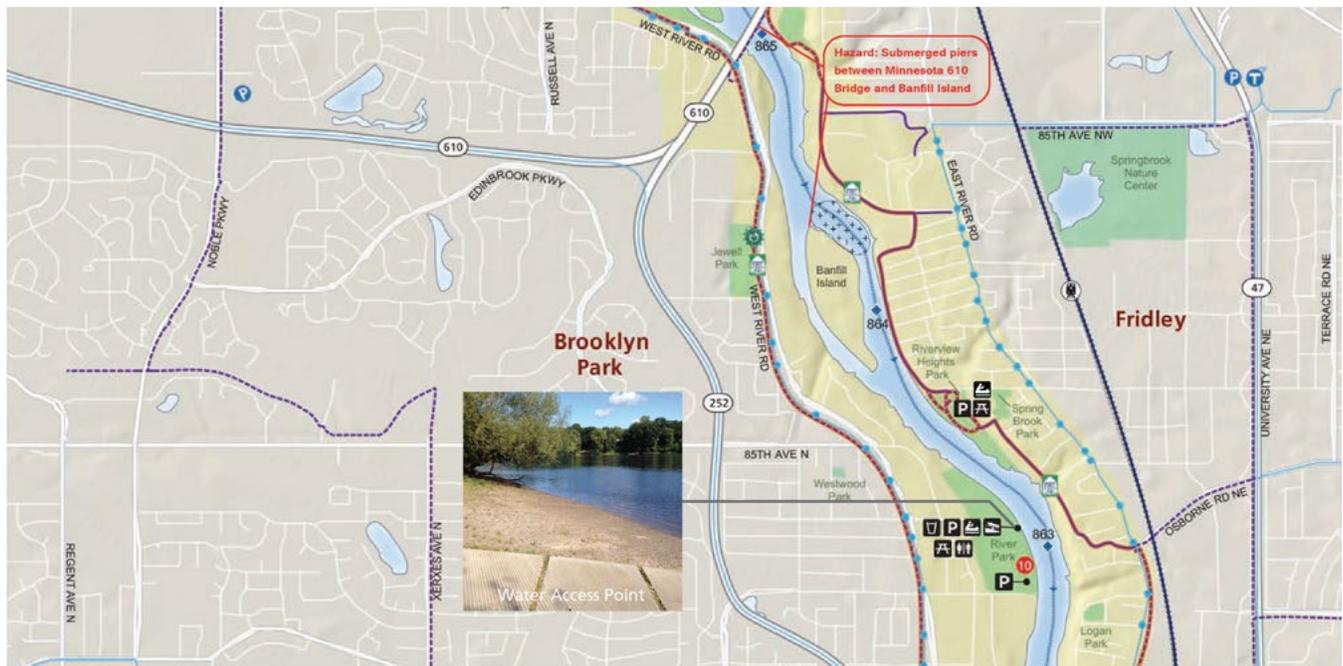
Mississippi River Companion - Map A19 (river miles 871 to 869)



Mississippi River Companion - Map A20 (river miles 868 to 866)



Mississippi River Companion - Map A21 (river miles 865 to 863)

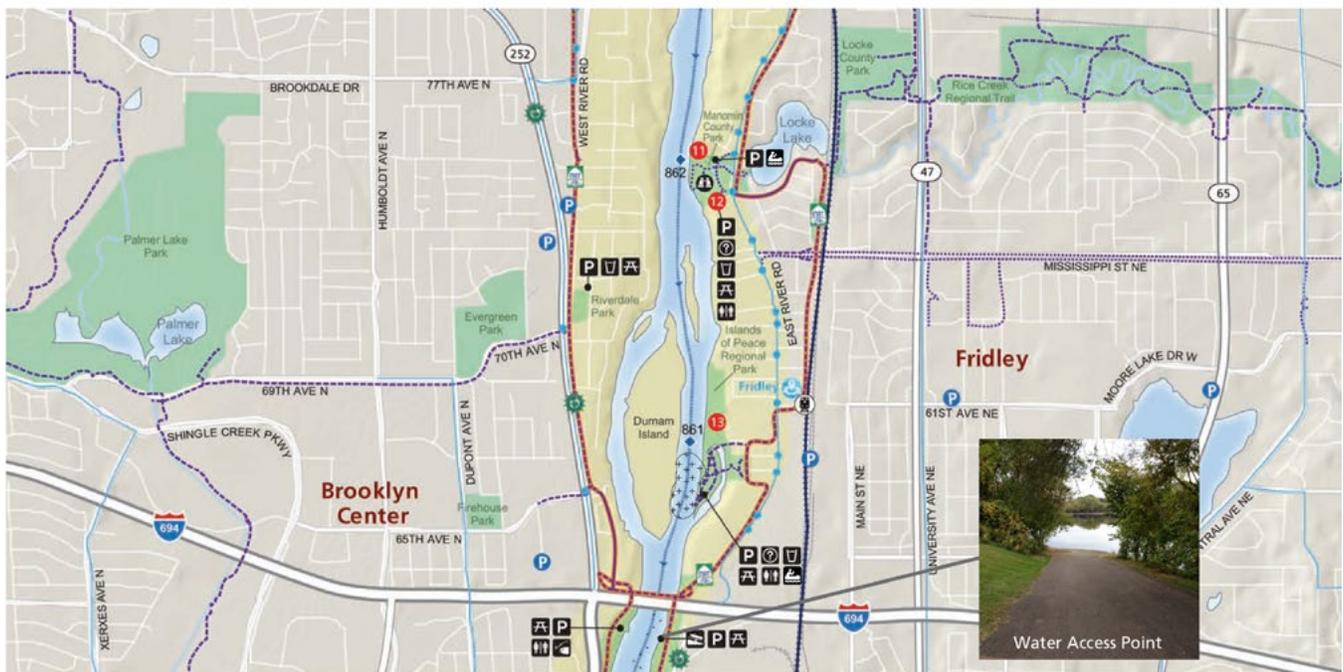


1 mile

River Mile	Latitude	Longitude
865	N 45 128696	W 93 298551
864	N 45 115025	W 93 290434
863	N 45 103591	W 93 278623

North ↑

Mississippi River Companion - Map B28 (river miles 862 to 861)

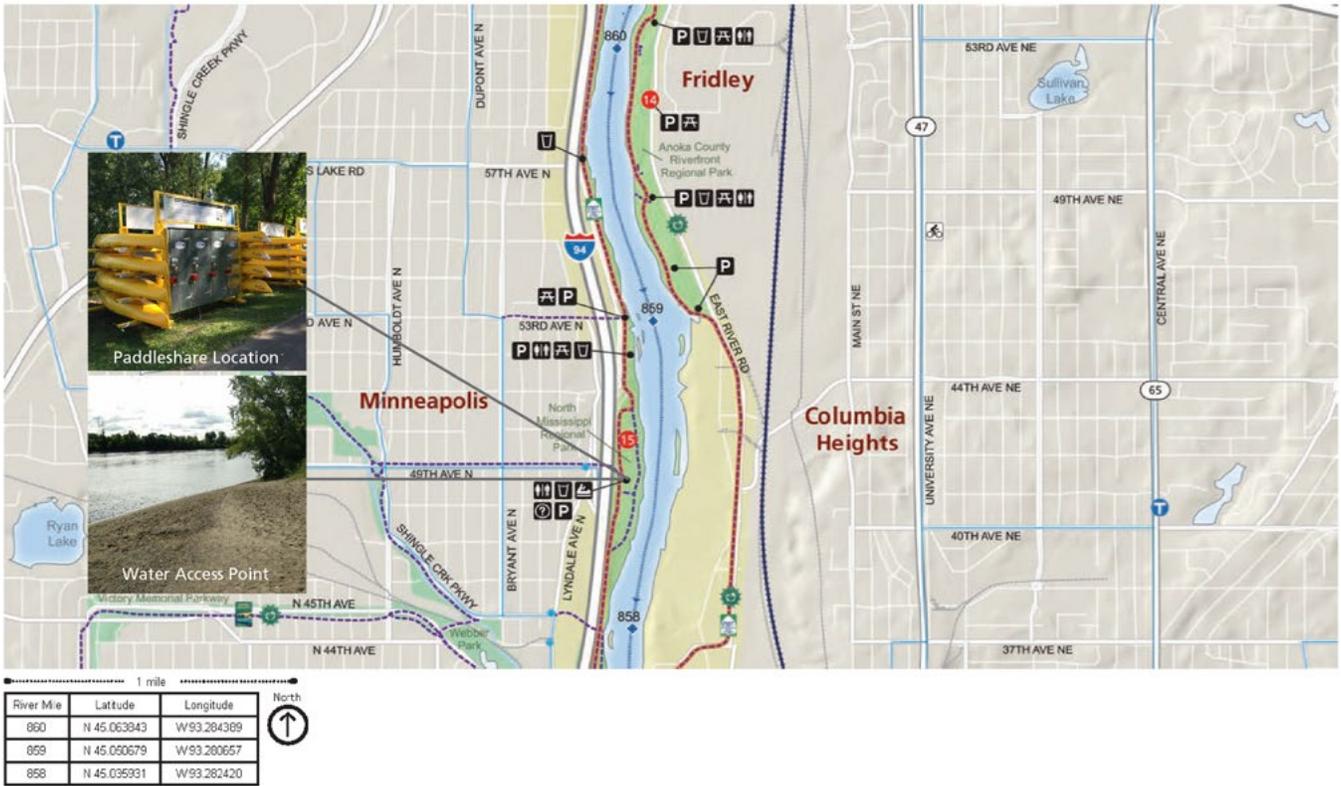


1 mile

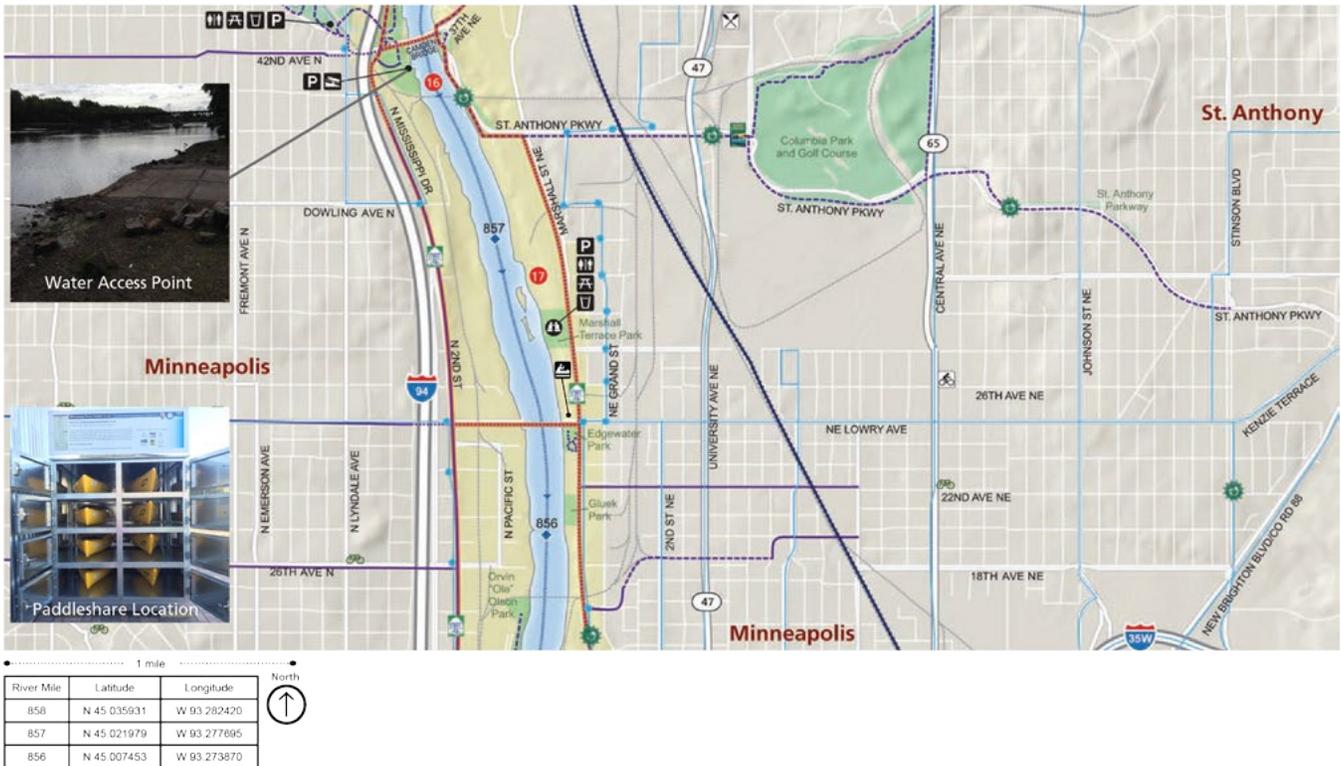
River Mile	Latitude	Longitude
862	N 45.090260	W 93.280009
861	N 45.076914	W 93.275277

North ↑

Mississippi River Companion - Map B29 (river miles 860 to 858)



Mississippi River Companion - Map B30 (river miles 858 to 856)



Mississippi River Companion - Map B31 (river miles 855 to 852)



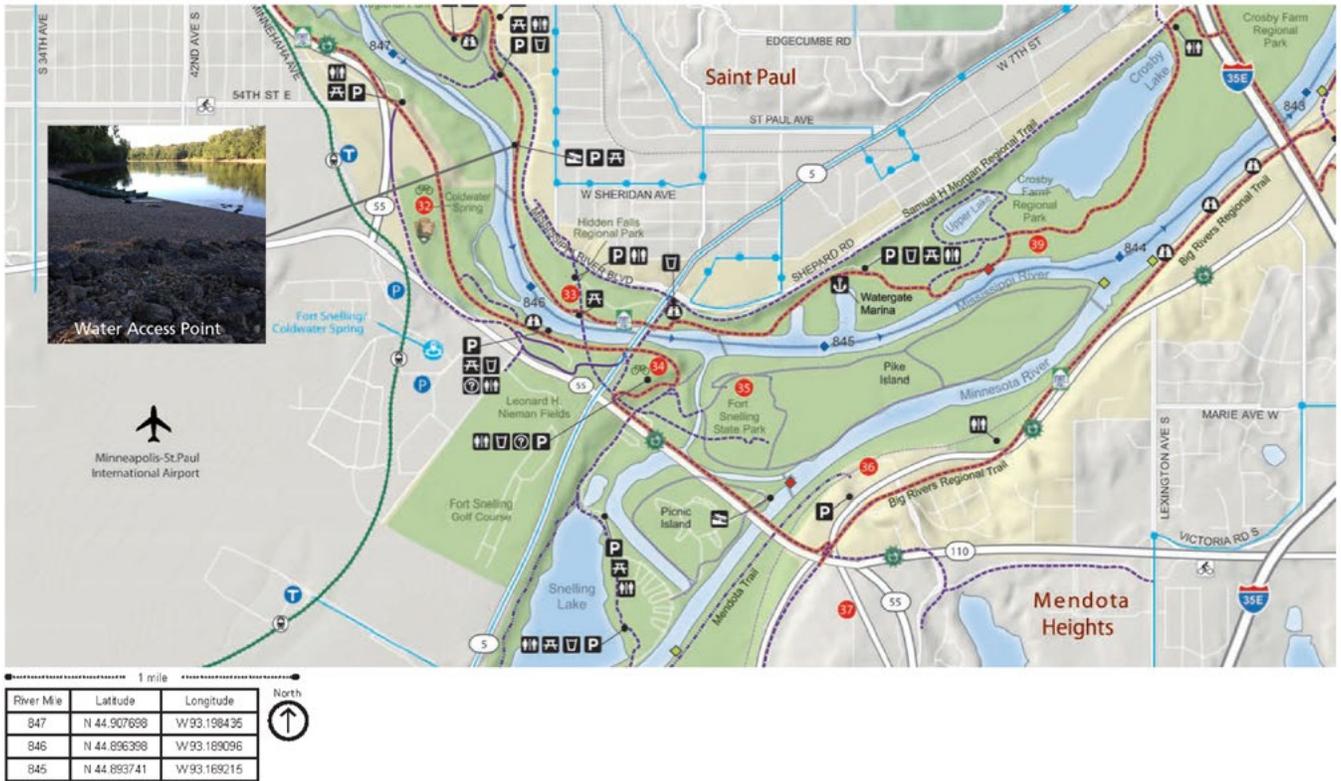
Mississippi River Companion - Map C38 (river miles 852 to 850)



Mississippi River Companion - Map C39 (river miles 849 to 847)



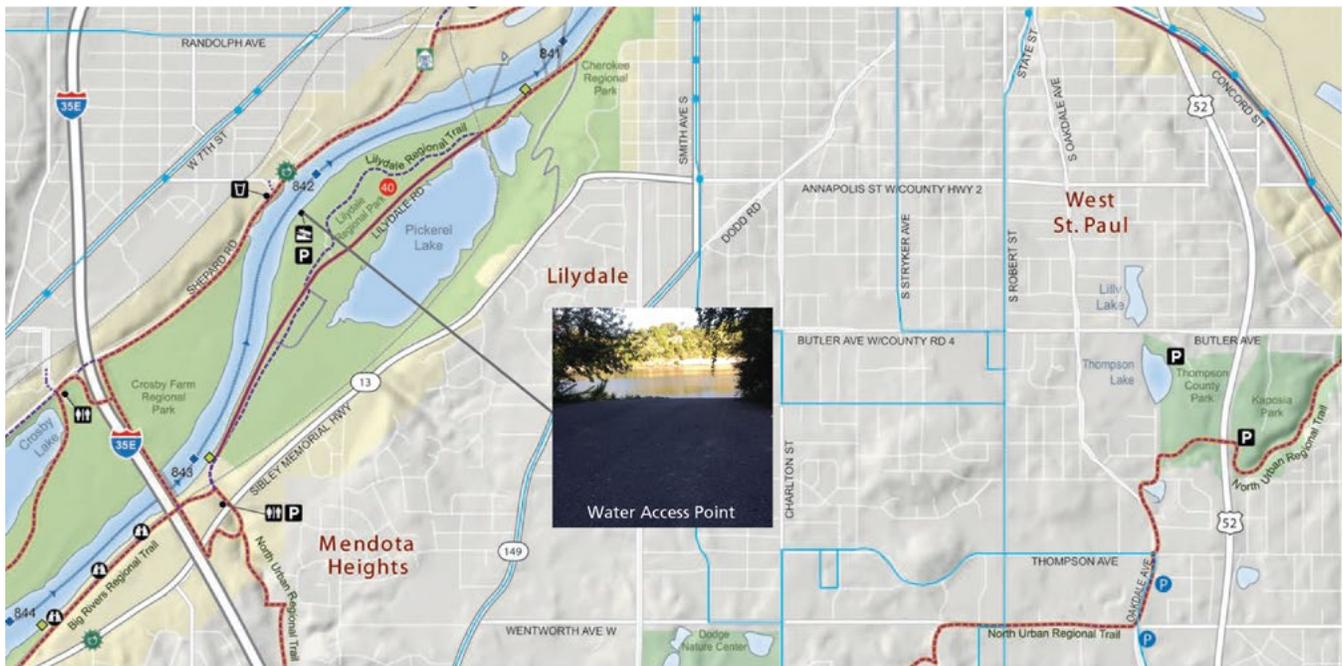
Mississippi River Companion - Map C40 (river miles 847 to 843)



Mississippi River Companion - Map C41



Mississippi River Companion - Map D47 (river miles 843 to 841)



1 mile

River Mile	Latitude	Longitude
843	N 44 906719	W 93 135846
842	N 44 919628	W 93 128351
841	N 44 926368	W 93 111285

North ↑

Mississippi River Companion - Map D46 (river miles 840 to 839)



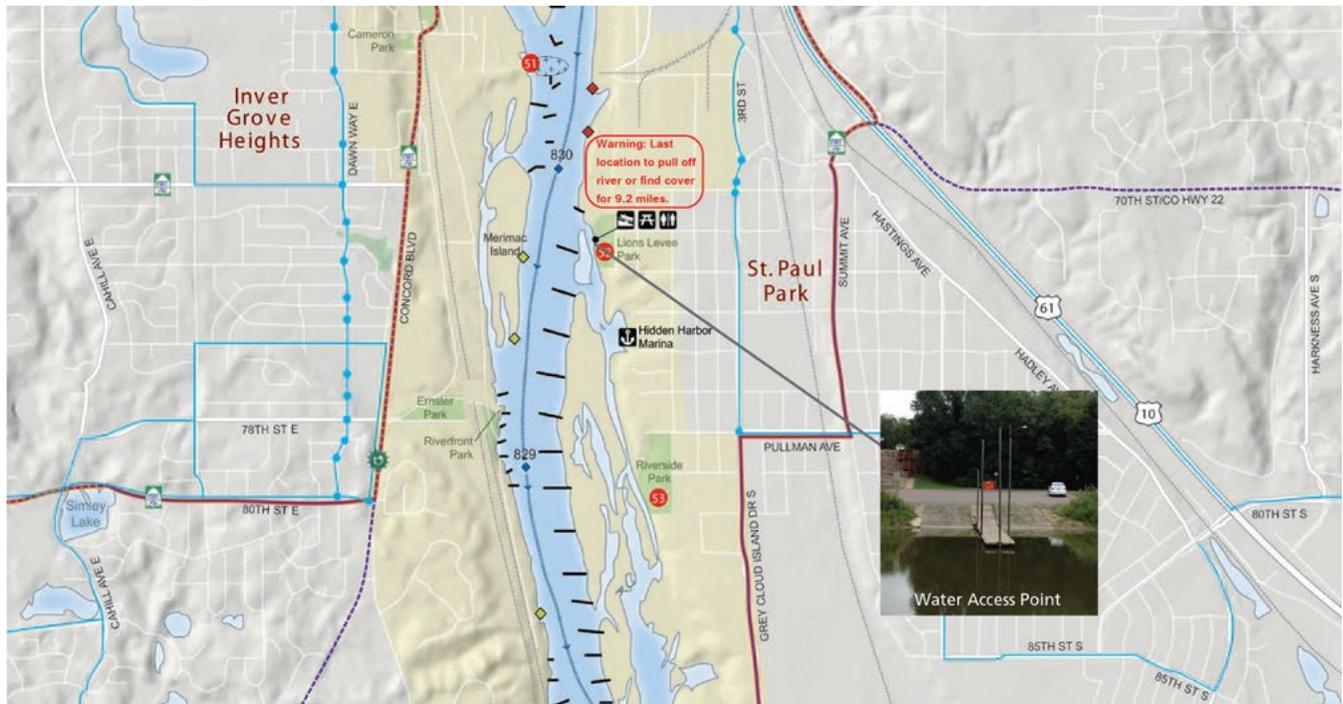
River Mile	Latitude	Longitude
840	N 44 937734	W 93 099948
839	N 44 945536	W 93 083299

Mississippi River Companion - Map E59 (river miles 833 to 831)



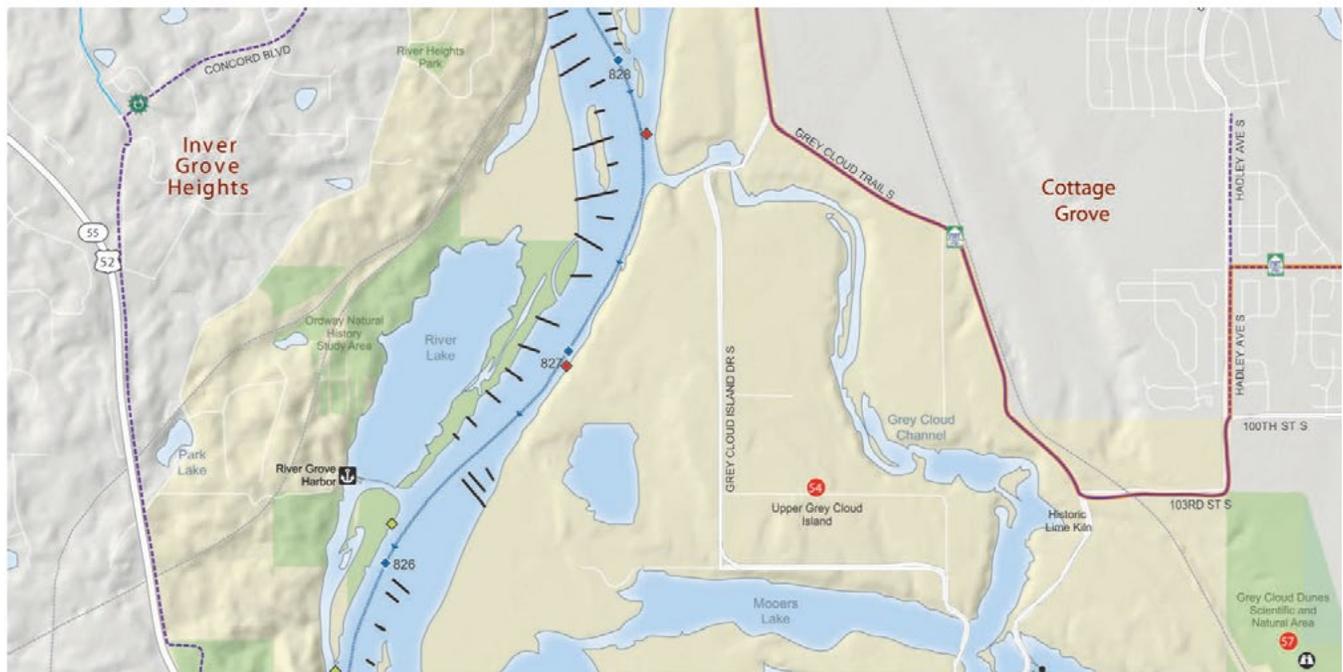
River Mile	Latitude	Longitude
833	N 44 899473	W 93 018574
832	N 44 875740	W 93 014830
831	N 44 862358	W 93 008663

Mississippi River Companion - Map E60 (river miles 830 to 829)



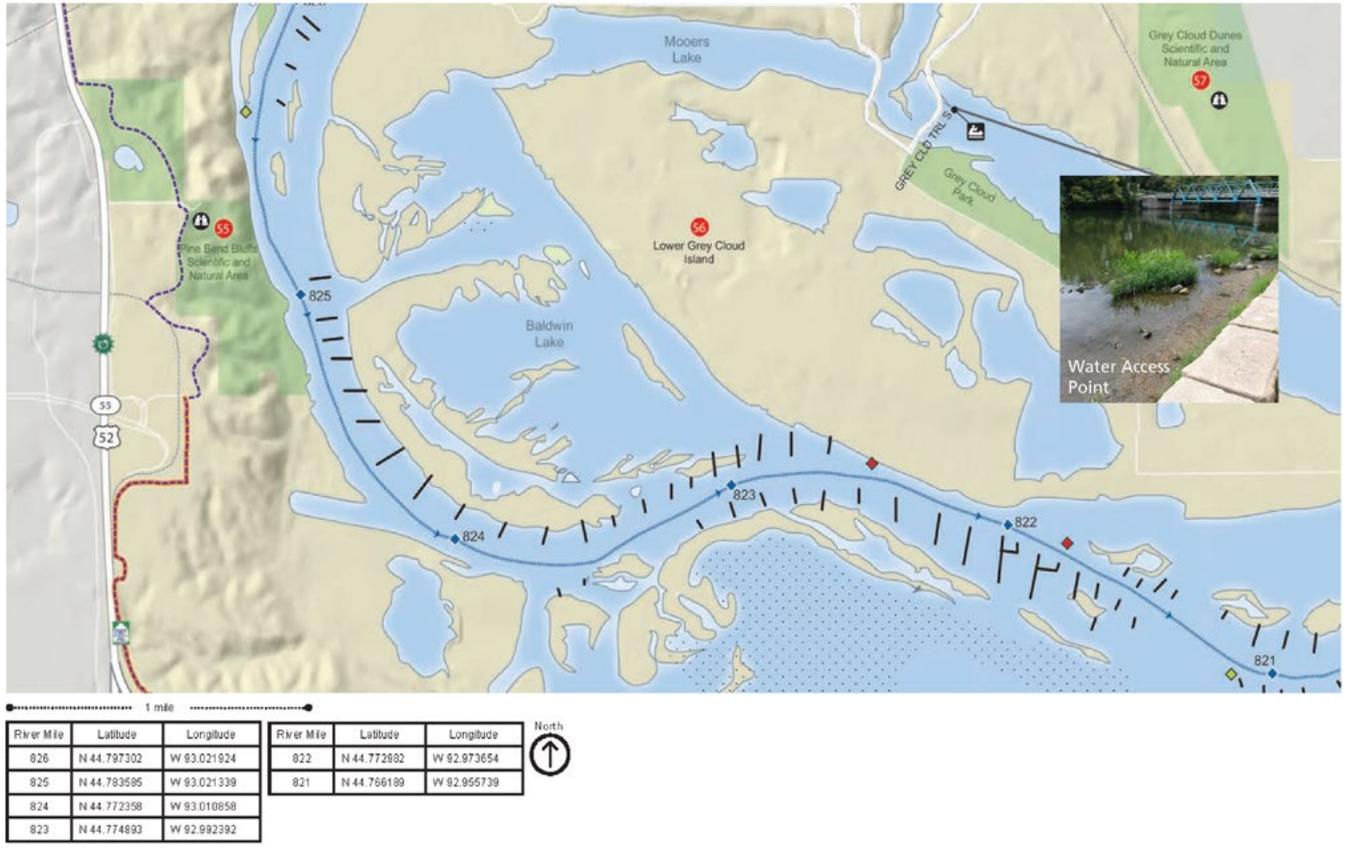
River Mile	Latitude	Longitude	North
830	N 44.921715	W 93.051860	↑
829	N 44.909676	W 93.044166	

Mississippi River Companion - Map E61 (river miles 828 to 826)

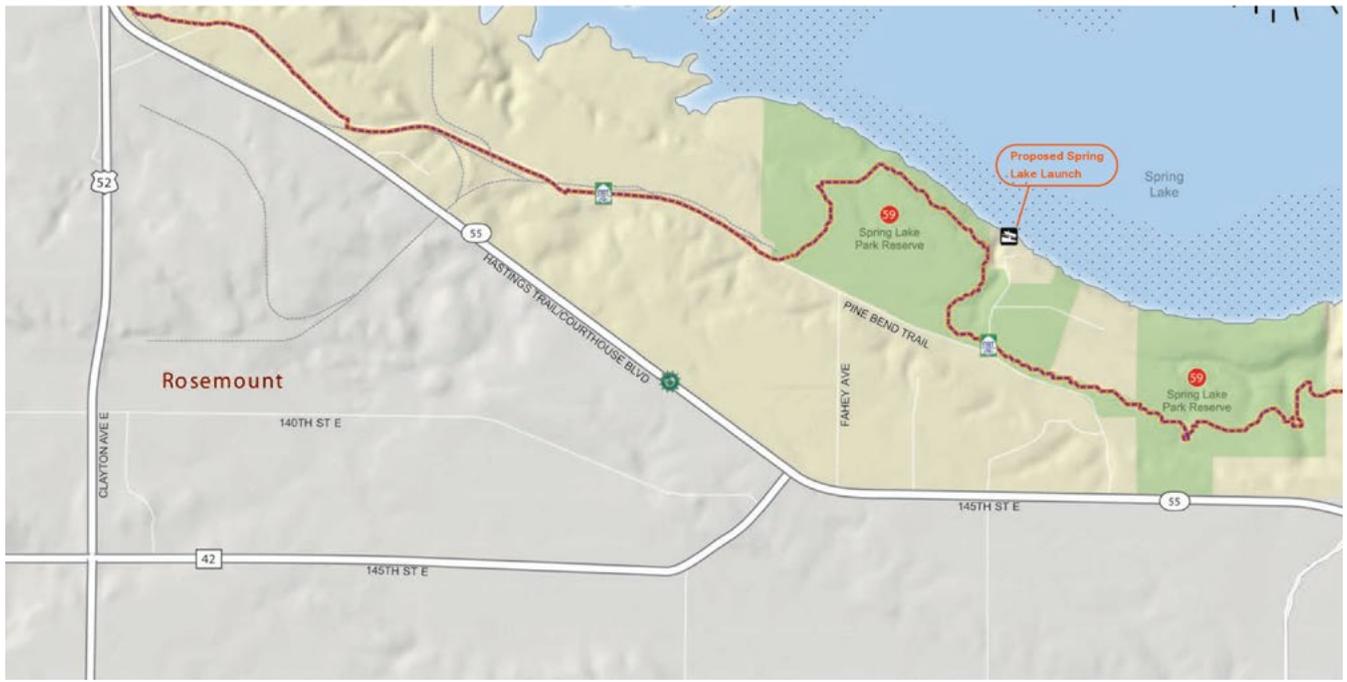


River Mile	Latitude	Longitude	North
828	N 44.896004	W 93.033990	↑
827	N 44.007016	W 93.009760	
826	N 44.797302	W 93.021924	

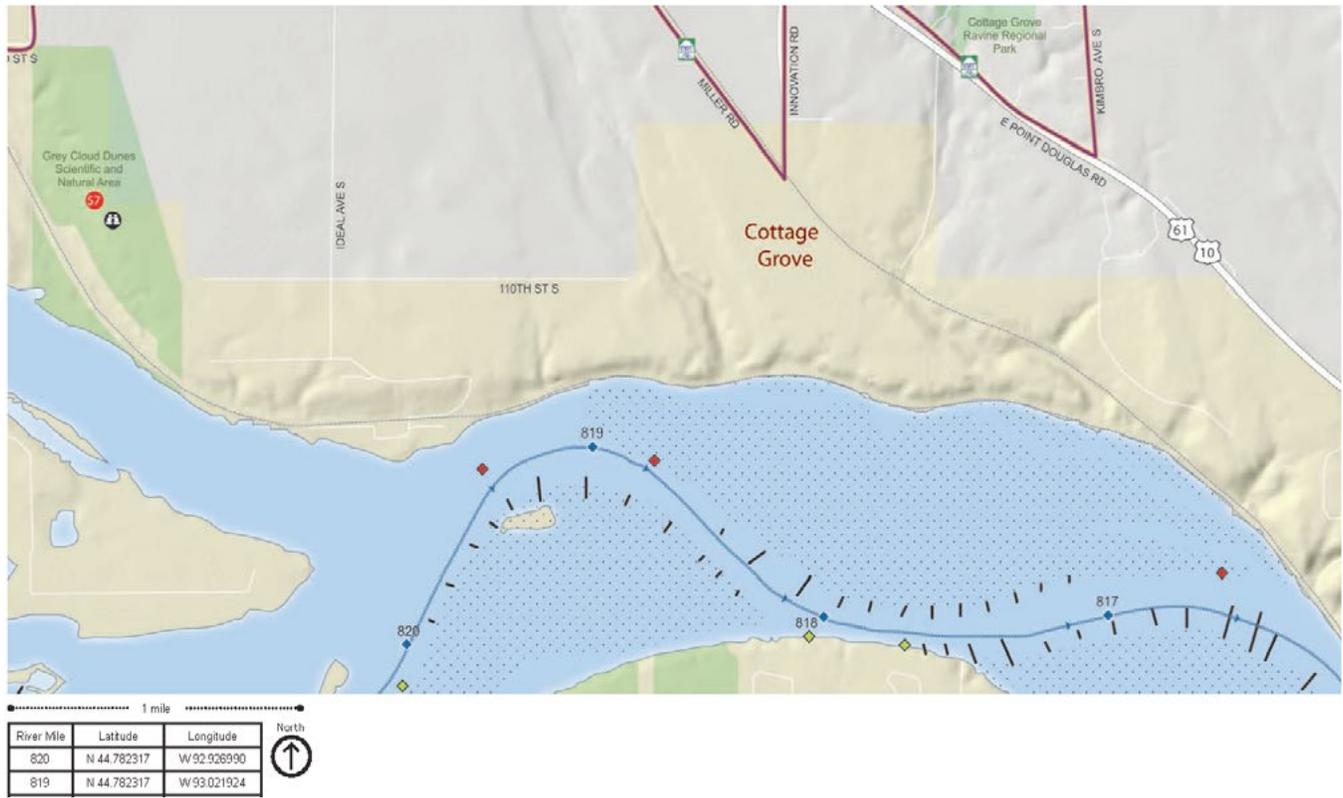
Mississippi River Companion - Map E62 (river miles 825 to 821)



Mississippi River Companion - Map E63



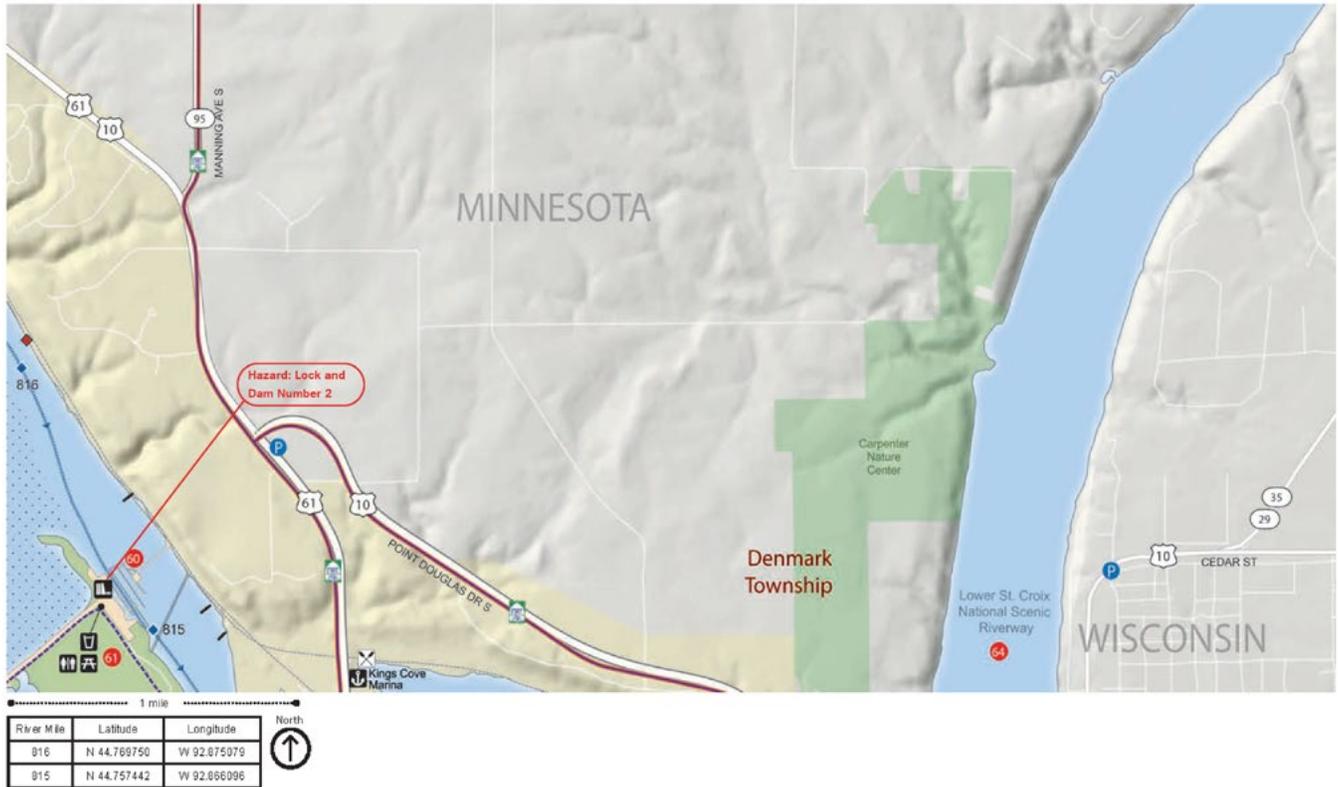
Mississippi River Companion - Map E64 (river miles 820 to 817)



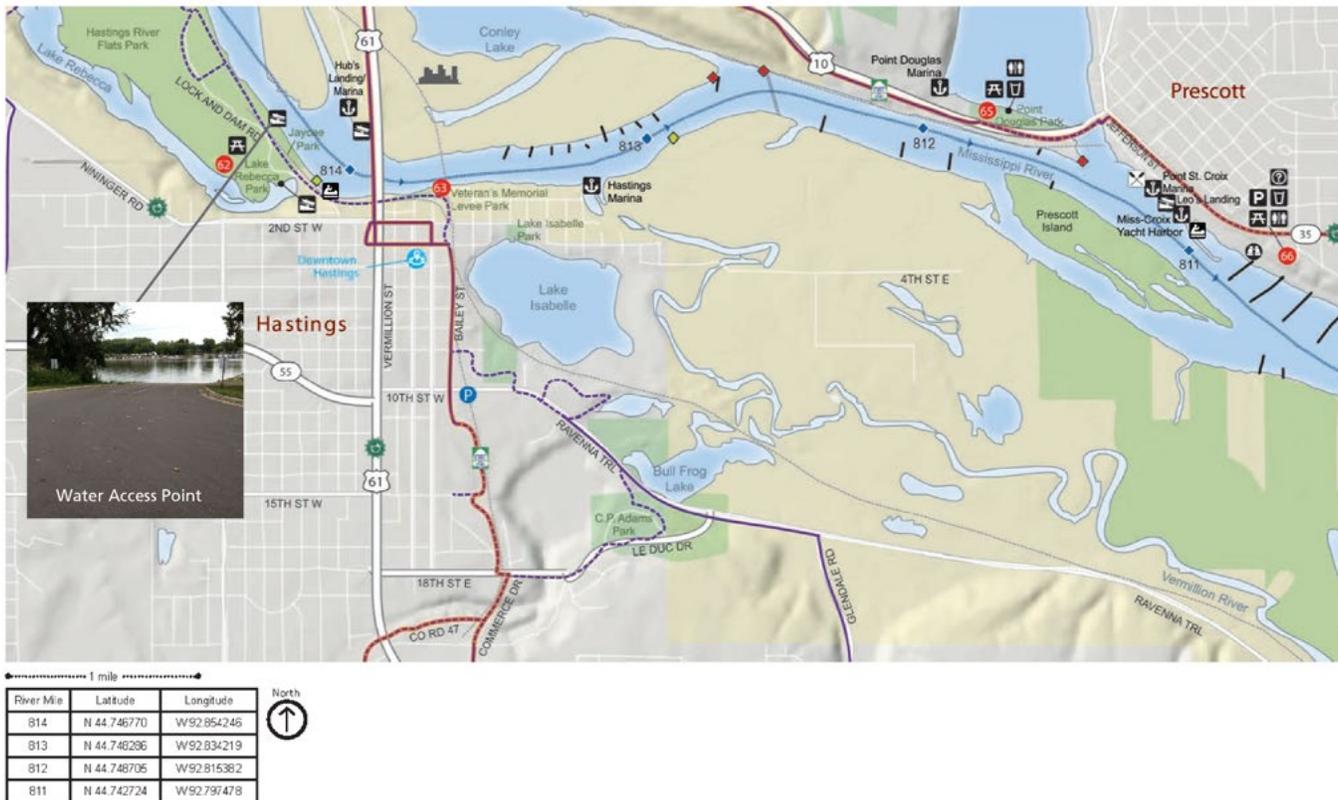
Mississippi River Companion - Map E65 (river mile 821)



Mississippi River Companion - Map E66 (river miles 816 to 815)



Mississippi River Companion - Map E67 (river miles 814 to 811)



Mississippi River Companion - Map E68 (river miles 810 to 808)



Mississippi River Companion - Map E69 (river miles 810 to 808)



Mississippi River Companion - Map E70 (river miles 807 to 806)



Appendix B: Outfitters

Outfitter	Canoe	Kayak	Paddle-board	Other	Shuttle	Guided tour	Location	Website
Above the Falls Sports	X	X		Sales and Storage	X	X	120 N 3rd Ave, Mpls, 55401 612-825-8983	abovethefallssports.com
Clear Water Outfitting Company	X	X		Sales	X	X	100 Pine St., Clearwater, MN 55320 320-469-1590	cwoutfitting.com
DIRO Outdoors Adventure Company		X	X	Education/Env Steward	X	X	Stillwater, MN See website	dirooutdoors.com
Hard Water Sports	X	X			X	X	979 Charles Avenue, St. Paul, MN 55104 651-302-1774	hardwatersports.com
Jumpwings Outfitters	X	X	X	Sales			327 1st Avenue North, Mpls, MN 55401 612-375-9835 612-333-8325	facebook.com/JumpwingsOutfitters
Midwest Mountaneering	X	X	X	Sales and Service			309 Cedar Avenue, Mpls, MN 55454 612-339-3433	midestmntn.com
Minnesota DNR	X	X	X	"I Can Paddle" Program	X	X	500 Lafayette RD, St. Paul, MN 55155 651-296-6157	dnr.state.mn.us/state_parks/ican/paddle.htm
Minnesota Rowing Shells				Rowing Rentals			5915 Russell Ave S., Mpls, MN 55410 612-926-2538	Minnesotarowing.com
Mississippi River Paddle Share		X		Paddle Share Program			4900 N Miss Drive, Mpls, MN 55430 651-293-8436	paddleshare.org/#home
Paddle Taxi					X		389 Herschel St., St. Paul, MN 55104 612-799-9668	paddletaxi.org
Stand Up Minnesota			X			X	389 Herschel St., St. Paul, MN 55104 612-799-9668	standupmn.org/
Three Rivers Park District	X	X	X	Rowboats		X	10360 W. River Rd. Brooklyn Park, MN 55444 763-694-7790 or 763-694-7693	www.threeriversparks.org/activities/paddling.aspx
University of Minnesota – Recreation & Wellness	X	X				X	123 Harvard Street SE, Mpls, MN, 55455 612-625-8790	http://recwell.umn.edu/outdoor/
Wahoo Adventures	X	X		Full Service Outings	X	X	White Bear Lake (base) 612-280-7299	mywahooadventures.com
Wilderness Inquiry	X	X		UWCA, etc.	X	X	808 14th Ave SE, Mpls, MN 55414 612-676-9400	wildernessinquiry.org

REPORT DOCUMENTATION PAGE

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	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)	8. PERFORMING ORGANIZATION REPORT NUMBER
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