



MISSISSIPPI RIVER COMPANION

Your Guide to Getting Around the Mississippi National River and Recreation Area



Published by the National Park Service

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Mississippi River Trail (MRT) in Saint Paul. (NPS)

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, IL., 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

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
- 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
- National Park Service Facility
- Picnic Area
- Fishing pier
- Restrooms

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

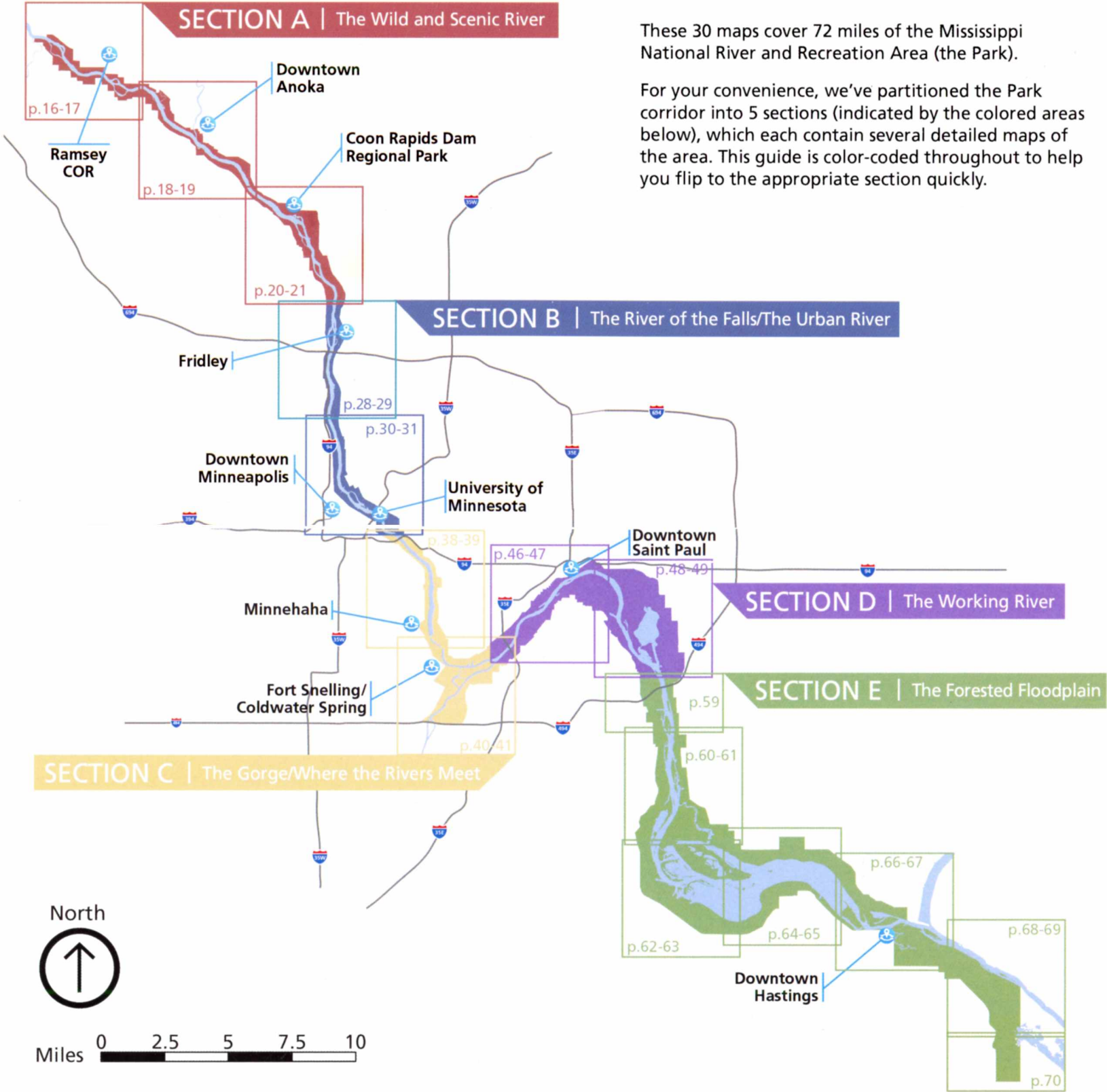


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Paul Labovitz,
Superintendent (NPS).

Welcome to your national park!

The Mississippi River Companion is your guide to recreational opportunities along a 72-mile stretch of the Mississippi River through the Twin Cities metro area that serves as the National Park for this great American river.

What comes to mind when you think about the Mississippi River? For many, the Mississippi conjures up images of riverboats and people singing M-i-s-s-i-s-s-i-p-p-i aloud. The “Big Muddy”, as it is known to many, is infused in our national identity and, without a doubt, a global treasure. The river is, after all, the very soul of our country.

The Mississippi River begins in Northern Minnesota and flows for 2,350 miles. On its way to the Gulf of Mexico, it drains a watershed that consists of approximately 40% of the continental United States and a small part of Canada. It is a critical migration corridor for millions of birds and essential to the ecological health of North America and changes more in our 72-mile National Park than in its entire length. It enters as a prairie river from the north, shallow with islands and multiple channels. In downtown Minneapolis the river spills over Saint Anthony Falls, the only remaining major waterfall on this great river. It then enters its only true gorge before meeting up with the Minnesota River. Below Saint Paul the Mississippi becomes the river of legend, a large floodplain river familiar to the nation and the world.

In 2013, the Mississippi National River & Recreation Area celebrates 25 years as a National Park.

The role of the National Park Service is to work with numerous partners including river organizations, state and local agencies and river communities, to protect and interpret the river’s key resources as part of a dynamic and vibrant region. The Mississippi River Fund, our principle philanthropic partner, provides resources to help achieve success in this complex environment.

Use the Mississippi River Companion to explore your national park from a bicycle, walking, or canoe trail. Park your car, go for a walk, or take public transit. Engage in a world-class, land and water trail system that connects you to the history and nature of this great river. Make sure you bring along your camera, fishing gear, binoculars, easel, skis or snowshoes. Find special places that, miraculously, allow you to leave the city behind. There are unlimited opportunities in this urban river wilderness.

Be safe and enjoy the Mississippi, America’s great river.

Paul Labovitz, Superintendent

Exploring the river

The Mississippi National River and Recreation Area includes hundreds of miles of shoreline and trails, countless channels and islands, hundreds of species of wildlife, and remnants of thousands of years of human history. You could spend a lifetime exploring it without exhausting its possibilities.

Use the maps in this book to explore the park. If you bring a GPS device, you can use the river mile coordinates throughout the beginning of each section to find where you are.

Red and green buoys in the river mark the shipping channel, which appears in dark blue on these maps (|||||||). If you're traveling upstream, keep the red buoys on your right and the green buoys on your left to stay in the main channel. The popular way to remember this is, "Keep RED on your RIGHT when RETURNING from the sea."

Wing dams and closing dams outside of the main channel are a hazard to boaters, even paddlers during low water, so consult the maps.

Closing dams and wing dams were built from loose rocks and brush to direct the current into the shipping channel. You can often spot them, because the water above them may be a different texture and reflect the light differently than the surrounding water. Closing dams sometimes block the channels between islands or between islands and the shoreline. Buoys are often, but not always, positioned at the end of a wing dam.



2008 Big River Art Contest Winner, Mary Miles. (NPS)

Watch for changes when you're on the river—not just from the seasonal pulses, but also from changing human needs.



Canoe Adventures. (Wilderness Inquiry)

Our Mississippi River is always changing. Bridges are rebuilt. New trails are developed. Prairies are restored. New buildings are constructed. Bald eagles, which were rare once, have now returned. Otters and other mammals are returning to the urban river, as well as wild turkeys and other birds. Bring guide books and binoculars—you might be rewarded with a new sighting.

The National Park Service, communities, and nonprofit groups hold a variety of events on the river, including classes, festivals, and volunteer events. Check www.nps.gov/miss and www.exploreminnesota.com for additional information and updates.

There are special opportunities for getting young people of all abilities on the river. Urban Wilderness Canoe Adventures is an outdoor canoe program focused on getting Twin Cities youth on the Mississippi River. It is a partner program between Wilderness Inquiry, the Mississippi River Fund and the National Park Service.

The National Park Service owns nine Mississippi River islands and **Coldwater Spring (Map C40)** in the national park. The rules affecting the use of these areas can be found at www.nps.gov/miss/parkmgmt/lawsandpolicies. These rules do not affect activity on private property, on city, county or state park land, or on federal land managed by other agencies.

Accessibility

Most facilities in the national park generally meet Americans with Disabilities Act (ADA) accessibility standards. However, some areas may not be appropriate for wheelchairs. Because of the varied character of these facilities, it is best to contact specific sites about your visit. The Minnesota Department of Natural Resources (DNR) "Accessible Outdoors" site at www.dnr.state.mn.us/accessible_outdoors is also a good source of information, as is the DNR's Metro Rivers Guide. A PDF of that guide can be found at www.dnr.state.mn.us/safety/boatwater/guides.html.

How to use the River Companion

The 72-mile-long Mississippi National River and Recreation Area (Park) begins in Ramsey and Dayton in the north and follows the river through Minneapolis and Saint Paul to just south of Hastings.

The **Mississippi River Companion** includes 30 maps showing land and water recreational amenities, transit facilities, alternative transportation options, landmarks, and other details in the national park. These maps are listed in the table of contents and shown on the index on the inside of the cover. Feature stories at the beginning of each section and at the end of the guide tell the area's fascinating history and provide information to help you plan a safe and enjoyable outing.

Most trails along the river are well marked. Many are designated part of the  **Mississippi River Trail (MRT)**, a 3,000-mile bicycle route that follows the Mississippi River through 10 states from its source, at Lake Itasca in northern Minnesota, to the Gulf of Mexico. In Minnesota, the MRT's bicycle-friendly roads and trails trace the river from the headwaters to the Iowa border. Ride it all or just enjoy a segment or two. Connect with the river, its communities, and their unique history and culture.

MRT segments pass through local, regional, and state parks and near historic sites and visitor centers. Occasionally new segments are built or old segments changed. Some segments of the **MRT** are not yet developed or are outside the national park's boundaries and do not appear on these



Trail signs along West River Parkway. (NPS)

maps. The goal is to complete the **MRT** by 2016, the National Park Service's Centennial. For more information visit www.mississippirivertrail.org and www.dot.state.mn.us/bike/mrt.

Call your destination for information on trail and river conditions, recommended routes, and information about bike rides and canoe routes in the national park or check www.nps.gov/miss/planyourvisit.

The  Great River Road (www.experiencemississippiriver.com) and  Grand Round Scenic Byways (www.minneapolisparks.org/grandrounds) are also good sources of information for planning scenic tours in the area, as is Pedal Minnesota (www.pedalmn.com). Join them in their quest to make Minnesota the most bike-friendly state.

In 2012, The Secretary of the Interior designated the 72-mile Mississippi National River and Recreation Area as a national blueway. The entire Mississippi River in Minnesota, including much of the river in the national park, is also a designated State Water Trail. Some stretches are very scenic and natural, while others are urban and industrial. Islands and backwater areas provide opportunities to explore nature and escape the everyday routine. Information about water trails can be found at www.dnr.state.mn.us/watertrails and on boating safety at www.dnr.state.mn.us/boating.



Susan Overson, NPS Outdoor Recreation Planner. (NPS)

Use the daymarks  , bridges, power lines, and other landmarks to find your way. Canoeists, kayakers, and small boaters should be alert to winds, water levels, river currents, and wakes from larger crafts, including barges.

The Minnesota Department of Natural Resources and various local units of government operate a variety of public water accesses, visitor centers, picnic areas, and parks. Use this guide to locate these facilities. River accesses and trail segments in the guide are open to the public, but are often adjacent to private land. Please respect private property and other people. If you have any questions or are unsure of where you are going, contact the National Park Service (651-293-0200 or www.nps.gov/miss).

You can find a digital version of the **Mississippi River Companion** at www.nps.gov/miss/planyourvisit. See River Resources in the back of the guide for additional sources of information to help you have a safe and enjoyable experience in the national park.

Leave the car behind

Taking the bus, riding a train, walking, biking, and canoeing are the best ways to see a national park! These are healthy choices for us, our community, and the river.

Biking is becoming the number one choice for alternative transportation. This is one of the most bike-friendly national parks in the country and home to a 72-mile stretch of the 3,000-mile Mississippi River Trail (MRT). The MRT, a national millennium trail, begins at the headwaters of the Mississippi River in northern Minnesota and travels through ten states on its way to the Gulf of Mexico. Follow the MRT icons () on the trails highlighted in **orange** in this guide to plan your trip.

All 72-miles of the river in the Park are accessible by boat. With a little planning, you can bike and canoe stretches of the river in the same day! Use this guide or our website (www.rivertripplanner.org) to plan your trip, or work with a local outfitter to create an experience on land and water. See the sections in this guide on bike and canoe safety to plan a safe trip.

The Park's alternative transportation system makes it very easy to get to and along the river without a car. The facilities identified in this guide build on existing regional transit, recreational trails and river access.



Hiawatha Light Rail in Minneapolis. (NPS)



Paddleboat by Mill Ruins in Minneapolis. (NPS)

For every transit trip taken there is a 3.5 lb. reduction in carbon emissions. If only one percent of visitors take transit to the Park, that's a reduction of 1,029,000 lbs. in carbon emissions per year!

Be a part of this effort: reduce greenhouse gas, improve the park's environmental condition, and make for a more enjoyable visitor experience.



Nice Ride Minnesota Bike Sharing System (Nice Ride Minnesota)

Use this guide to identify the bus and rail lines that serve the river corridor and the river nodes  that are the best points of access for nearby destinations. You can also use the NPS mapping tool (www.rivertripplanner.org) and Metro Council's Trip Planner (www.metrotransit.org/tripPlanner) to plan your route.

A signature feature of the Park's alternative transportation system is  Nice Ride Minnesota's bike sharing program, which links area transportation, recreational trails, river access, and surrounding neighborhoods with park destinations. This is a first-of-its-kind program in a national park. In 2013, over 1,300 Nice Ride Minnesota bright green bikes in 145 stations can be found in the Minneapolis/Saint Paul area. Most are near bus, rail, and bike routes. Over 60 of these stations and 720 bikes are along or near the river. These stations compliment the Park's network of river trails, bicycle lanes, sidewalks, and mass transit. Rent one for a couple of hours or become a member if you plan to use these bikes often. They are a convenient, healthy, and affordable way to get around town. Use this guide to find a station along the river. You can find all metro area stations at secure.niceridemn.org/map.

Have fun, stay fit, and reduce environmental impacts while exploring your national park.

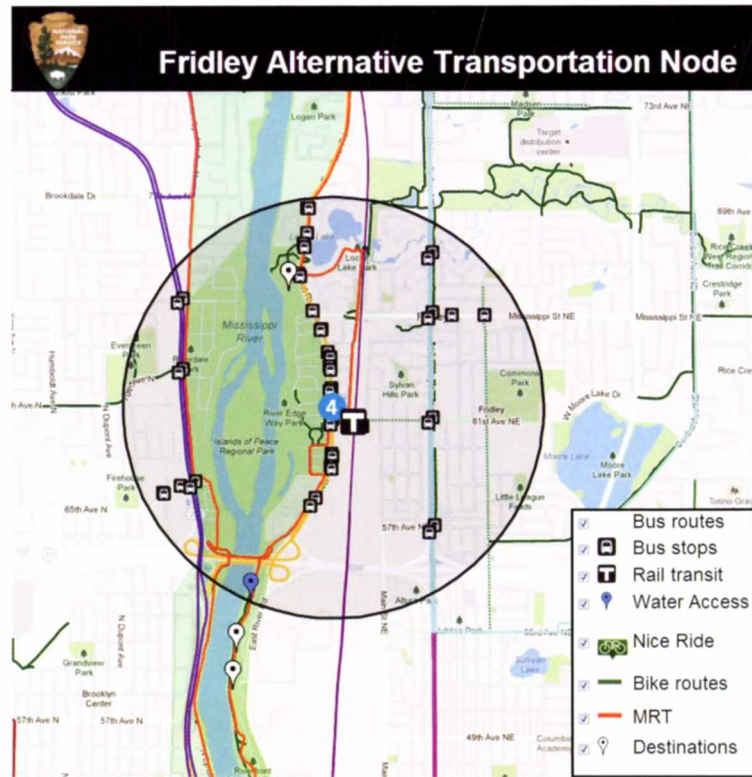


Alternative Transportation Nodes in the Mississippi National River and Recreation Area

Alternative Transportation Nodes (nodes) provide visitors a great way to access the park without the use of a car. Within a mile of the centerpoint of each node, there are at least two ways to access the park without a car (via bus, rail, bike, or water access), at least one key park-related destination to visit (such as a regional park, museum, or historic site), and direct access to the park.

Though all nodes share these characteristics, each node offers a unique mix of visitor experiences. In the urban core, nodes are closer together to provide more access to the park whereas in suburban areas, nodes are further apart. In addition to the 9 nodes listed on the page below, additional nodes are under development. From north to south, the nodes in the park and their amenities are listed in the table on the next page.

To plan your trip using the nodes, visit
www.rivertriplanner.org.



Screenshot of alternative transportation system options and park destinations near the Fridley node using www.rivertriplanner.org. (NPS)

Alternative Transportation Node Information

 Alternative Transportation Node	Centerpoint of Node	Map page	Transportation, destination, and amenity options									
			Rail Station	Bus Service (# of routes)	Nice Ride Station	MRT	Bike Trails	River Crossing	Water Access	Park(s)	Downtown Access	Cultural/Historic Destinations
Downtown Anoka	3rd Ave. & Main St.	A18	1	4	No	Yes	Yes	1	1	Yes	Yes	Yes
Coon Rapids Dam Regional Park	Visitor Center	A20	No	3	No	Yes	Yes	1	1	Yes	No	No
Fridley	Fridley Northstar Station	B28	1	8	No	Yes	Yes	1	1	Yes	Yes	Yes
Downtown Minneapolis	Downtown East/Metrodome Station	B31	4	>10	>10	Yes	Yes	5	No	Yes	Yes	Yes
The University of Minnesota	Busway & Harvard St.	B31	1	>10	>10	Yes	Yes	6	1	Yes	Yes	Yes
Minnehaha	Minnehaha Ave. & Nawadaha Blvd.	B31	3	7	Yes	Yes	Yes	1	1	Yes	No	Yes
Fort Snelling/Coldwater Spring	Fort Snelling Light Rail Station	C40	2	4	Yes	Yes	Yes	1	1	Yes	No	Yes
Downtown Saint Paul	Union Depot Station	D46	1	>10	>10	Yes	Yes	3	1	Yes	Yes	Yes
Downtown Hastings	Ramsey St. & 2nd St.	E67	No	No	No	Yes	Yes	1	1	Yes	Yes	Yes

SECTION A The Wild and Scenic River

10



The Wild and Scenic River. (NPS)

North of the Twin Cities the Mississippi River is designated as a state wild and scenic river, as is the Rum River. You can see undeveloped islands and a river that begins to slow as it approaches the pool above the Coon Rapids Dam.

The Coon Rapids Dam offers scenic views of the river and its backwaters and is a major pedestrian connection between the river's east and west banks. Trails on both sides follow a mostly natural river bank.

Points of interest

- 1 Crow River
- 2 Red River Ox Cart Trail
- 3 Cloquet Island Scenic Overlook Park
- 4 Mississippi West Regional Park
- 5 Mississippi River Community Park
- 6 Peninsula Point Two Rivers Historical Park
- 7 Mississippi Point Park
- 8 Coon Rapids Dam
- 9 Cenaiko Lake
- 10 River Park

As you approach I-694 you enter more traditional residential areas. However, a number of parks do retain the secluded and natural feel.

Below I-694 the Mississippi River begins to transition to a more urban river. Industries and adjoining neighborhoods line both sides of the river, but portions are reverting back to natural areas and parks. North Mississippi Regional Park is one of several jewels along this stretch.

River mile 879 to 877

This shallow, winding stretch of the Mississippi is designated a Minnesota Wild and Scenic River. It holds abundant wildlife and little development—you could easily imagine that you are 100 miles farther north. During times of low water you may have to drag your canoe over an occasional gravel bar.

1 The Crow River (879.6 W) is popular with paddlers, especially the North Fork, which is also a Minnesota Wild and Scenic River.

Originally an early American Indian trail modified by settlers, **Dayton River Road** is part of the Mississippi River Trail and Great River Road Scenic Byway. The road doesn't have much of a shoulder or much traffic. The nearest bridge crossing is about four miles upriver.

Dayton Port Wayside Rest Area (878.6 E) has plenty of big shade trees and scenic picnic sites with views across the river to Goodin Island.

During most of the 19th century, the **2 Red River Oxcart Trail** linked Saint Paul with settlements in Manitoba, Canada. Highway 10 and the nearby railroad tracks generally follow the route of this historic trail along the river.

Goodin Park (878.0 W) has picnic tables, grills, and a short walking trail through a typical floodplain forest.

🕒 Getting there without the car

No bus routes or rail stations currently serve the river in this area, but the MRT follows the river on both sides.



Confluence of the Crow and the Mississippi rivers. (NPS)

River mile 876 to 874

This quiet, winding reach of river is lined with big trees, undeveloped islands, and scattered homes. It is not uncommon to find bald eagles perched in the trees or soft-shelled turtles sunning themselves on logs and driftwood in the backwater areas around the islands.

Remnants of the area's original hardwood forest and prairie vegetation can also be seen along the river. In many ways, this stretch of river feels more like the Upper St. Croix, a national scenic riverway, than the semi-suburban Mississippi.

Public access along this stretch can be found at

3 Cloquet Scenic Overlook Park (875.5 W) and on a short stretch of trail in **Ramsey** (875 E) and Mississippi West Regional Park. The park is on Dayton River Road on the bluffs above Cloquet Island and the Mississippi River.

The largely undeveloped **4 Mississippi West Regional Park** (875.7W) lies across the river on the east side with a recently opened boat launch.

Getting there without the car

No bus routes currently serve the river in this area, but the MRT travels along the river on the right descending bank and the Northstar commuter rail follows the river from Ramsey to Minneapolis.



Bald eagle perched in a cottonwood tree. (NPS)

River mile 873 to 869

There are numerous parks in this reach. **5 Mississippi River Community Park** (873.5 E) has a short trail system and accessible fishing pier. **6 Peninsula Point Two Rivers Park** has nice amenities and good access to the river. During low water there are many rocks and sandbars.

The Highway 169 (Ferry Street) Bridge (871.6) is remarkably graceful-looking from the water. It is a very busy bridge, with good access for bicyclists and pedestrians to downtown Anoka.

The Mississippi River Trail follows paved trails on the west side of the river, then follows mostly residential streets downriver. On the east side of the river, the trail crosses the Rum River in Anoka over a pedestrian/bike bridge a block before Main Street, then follows residential streets to **East Coon Rapids Dam Regional Park**.



Peninsula Point Two Rivers Historical Park. (NPS)

Getting there without the car

Bus routes with river stops:

West	766
East	850 852

Additional transit:

Northstar Rail Anoka and Coon Rapids Stations



Downtown Anoka. (NPS)

The Historic Rum River Regional Trail intersects with the Mississippi River Trail in Anoka. The Rum River was used by the Dakota Ojibwe people and many early European explorers, and later carried logs to the Mississippi River. The **Rum River spillway** is a good fishing spot and is wheelchair accessible.

Elm Creek enters the Mississippi River at **7 Mississippi Point Park** (871.3 W). The creek's watershed drains 83,000 acres in northern Hennepin County.

River mile 869 to 865

The **8 Coon Rapids Dam** raises the water level in this stretch, which makes it popular with power boaters and waterskiers. The shoreline has a very suburban look. Suburbia gives way to green space as you enter **Coon Rapids Dam Regional Park** (865 to 867.7), which extends along both sides of the river. Traveling upriver, this is the first dam on the Mississippi that does not have a lock. Paddlers can portage around the east side of the dam.

The park on the east side of the river has paved bike/hike trails both upstream and downstream of the dam. The visitor center has exhibits about People and the River and a large aquarium.



Coon Rapids Dam Observation Deck. (NPS)

🔄 Getting there without the car

Bus routes with river stops: **West 766**



The Coon Rapids Dam Regional Park. (NPS)

The park on the west side of the river offers turf trails with intimate views of the downstream river, islands, and the deep floodplain forest. The visitor center has live turtles and fish with exhibits about Life in the River and children's activities.

The Rush Creek Regional Trail begins at the west Coon Rapids Dam Regional Park and runs 7 miles west to Elm Creek Park Reserve.

The Mississippi River Regional Trail begins in the east Coon Rapids Dam Regional Park and follows a scenic, well-marked route downriver for 11 miles to Minneapolis. On the west side the bike trail follows West River Road to North Mississippi Regional Park and beyond.

River mile 865 to 863

Below the dam the river returns to a more natural state, with minor rapids, wooded shorelines, and abundant wildlife.

9 **Cenaiko Lake** in Coon Rapids Dam Regional Park is a designated trout lake that is stocked annually.

Below the **Richard P. Braun (Highway 610) Bridge** (865), suburban development near the river is tucked behind high, wooded banks. Keep an eye out for turkeys and other wildlife near the roads and trails.

The **Mississippi River Trail** on the east side of the river passes through woods near the Highway 610 Bridge, then follows wooded residential streets, often with a good view of the river, and passes through **Riverview Heights Park** (863.5 E).

The **Mississippi River Trail** on the west side of the river follows a paved trail next to West River Road, usually a couple of blocks from the river. A stately white building on the east side of the river across from **10 River Park** (863 W) takes water from the Mississippi for the Saint Paul water system.

The National Park Service and Anoka County have worked together on several restoration projects in this stretch of river.

Getting there without the car

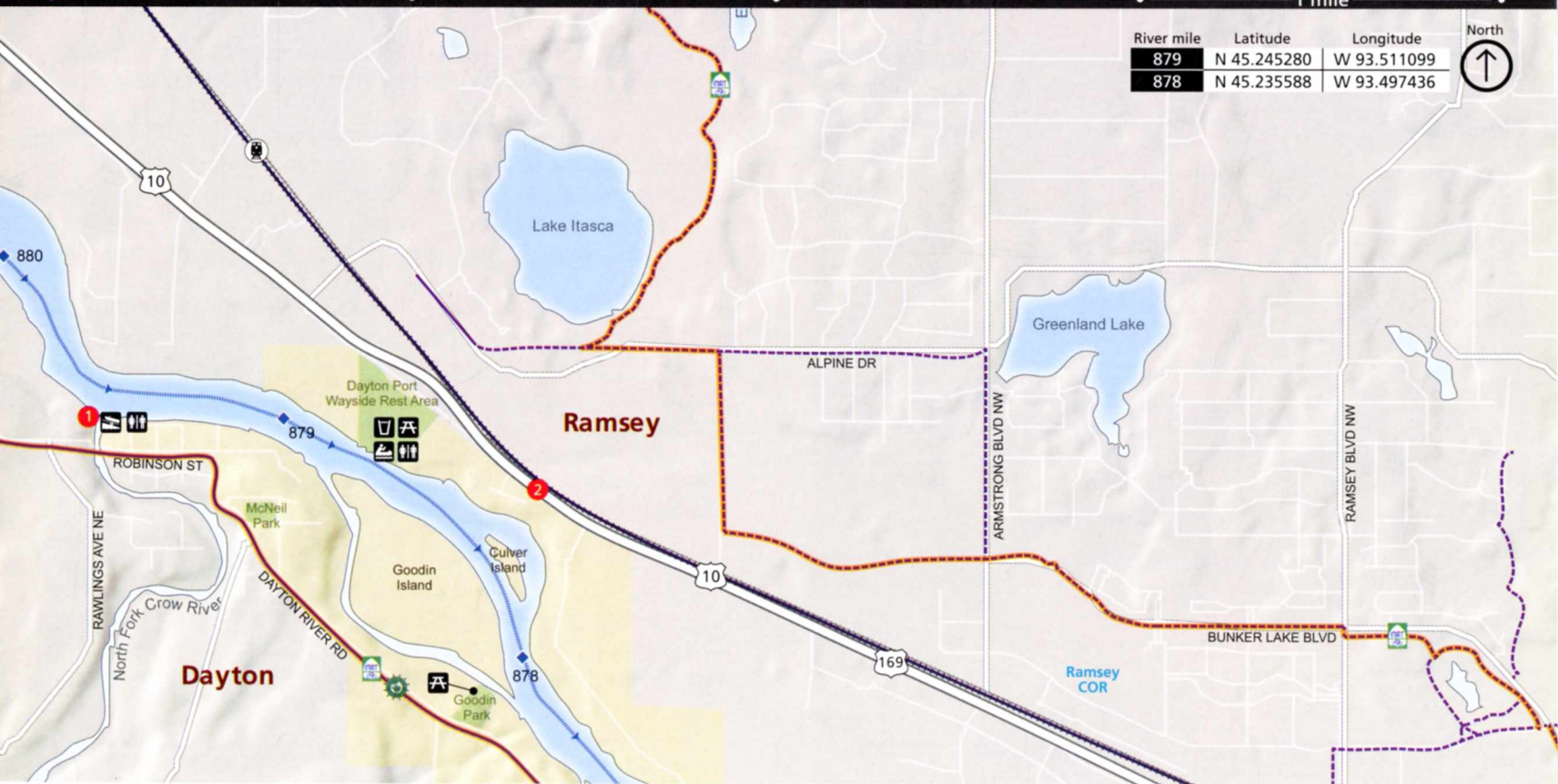
Bus routes with river stops:

West	766
East	852



Cenaiko Lake Prairie Restoration. (NPS)

River mile	Latitude	Longitude
879	N 45.245280	W 93.511099
878	N 45.235588	W 93.497436

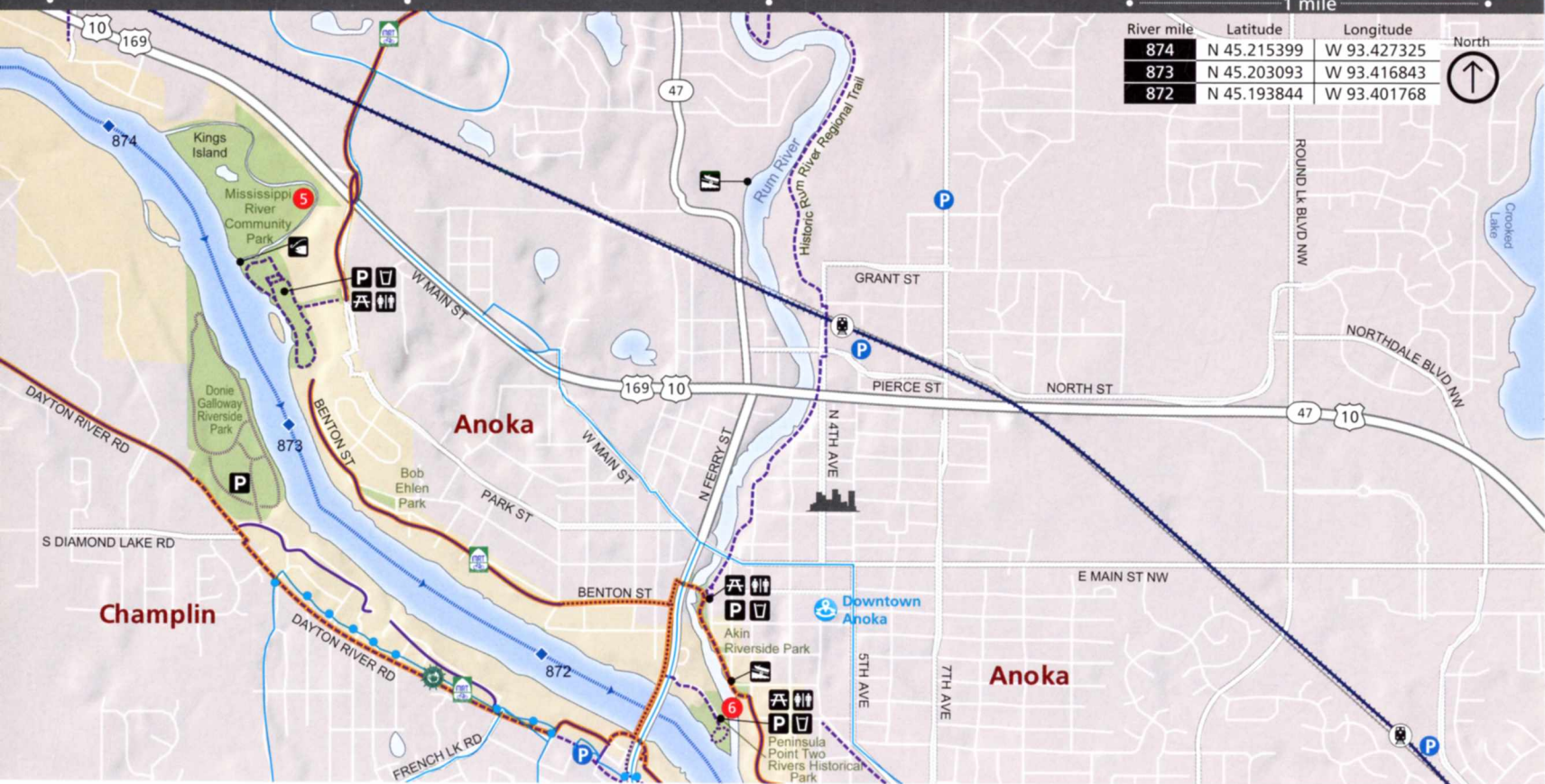


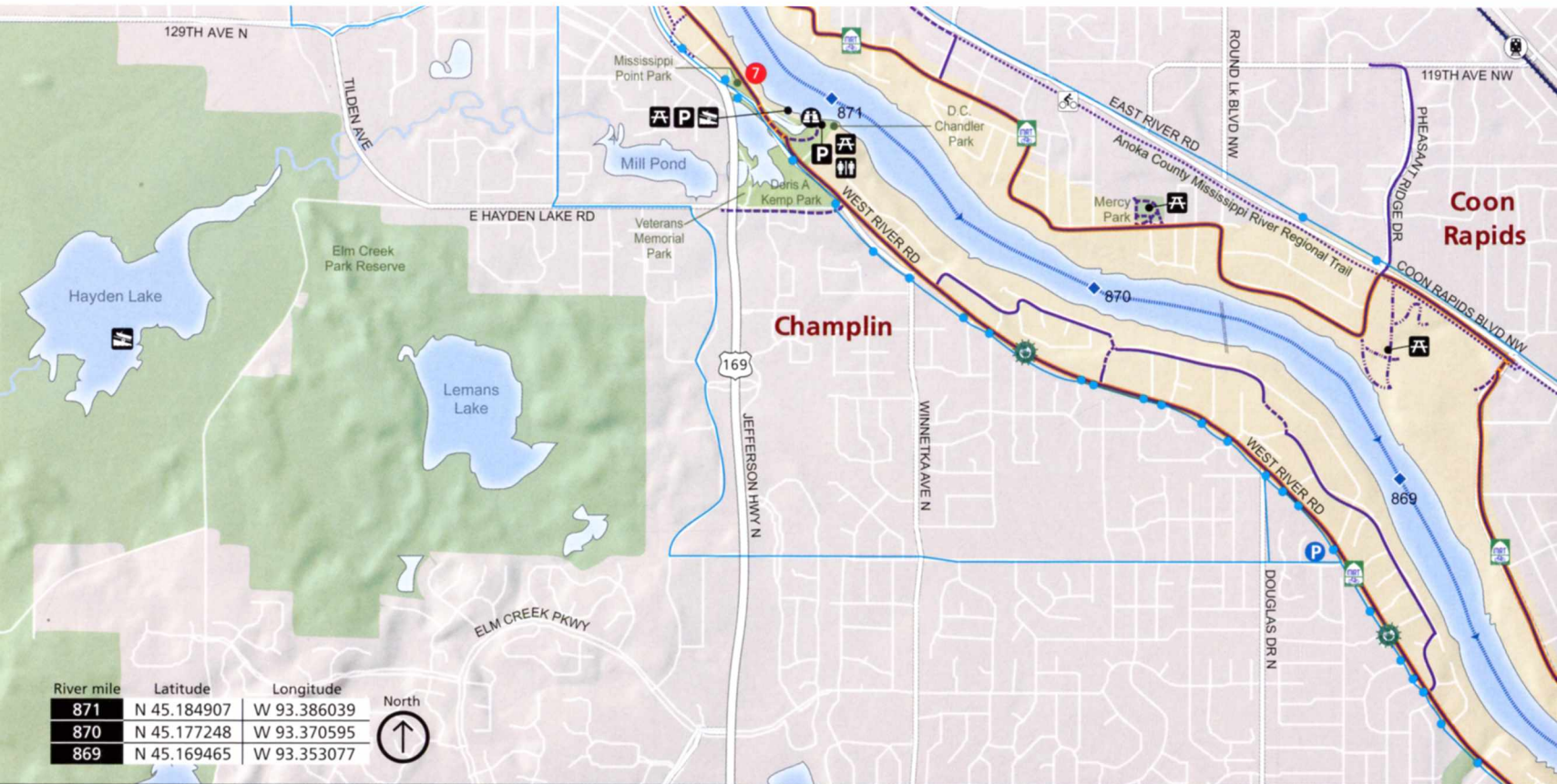


1 mile

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

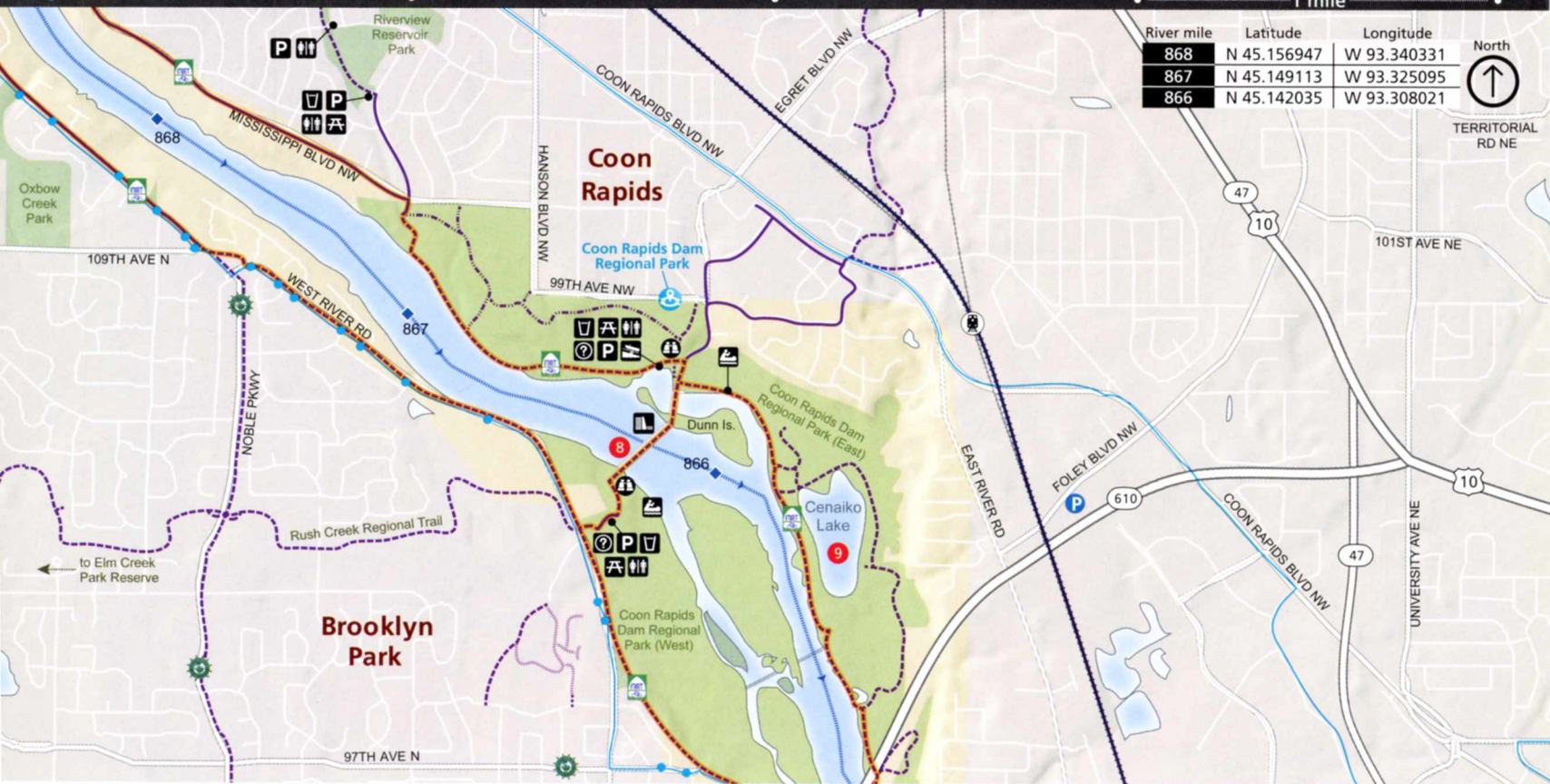


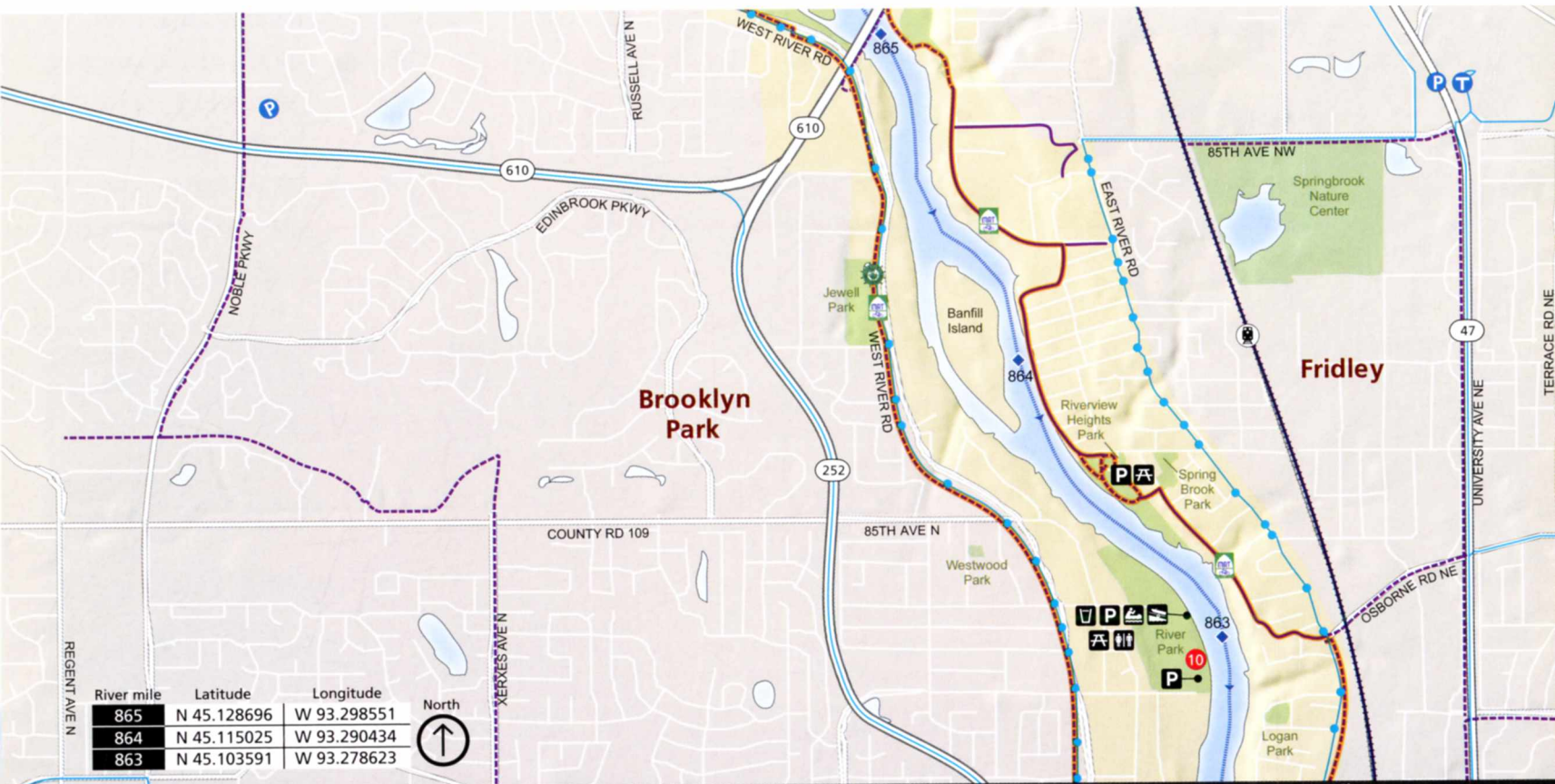


River mile	Latitude	Longitude
868	N 45.156947	W 93.340331
867	N 45.149113	W 93.325095
866	N 45.142035	W 93.308021



TERRITORIAL
RD NE





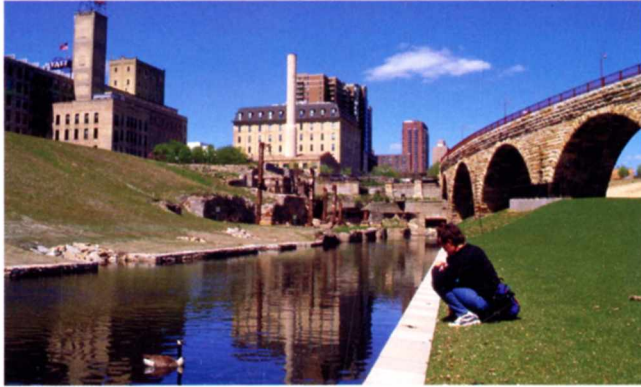
River mile	Latitude	Longitude
865	N 45.128696	W 93.298551
864	N 45.115025	W 93.290434
863	N 45.103591	W 93.278623



SECTION B

The River of the Falls/The Urban River

22



Mill Ruins Park. (NPS)

Discover the birthplace of Minneapolis, where downtown converges with the Mississippi River at St. Anthony Falls. The Stone Arch Bridge is a perfect place to view the falls. This National Civil Engineering Landmark, built as a railroad bridge in 1883, now allows pedestrians, bikers, inline skaters, and horse-drawn carriages to cross the river.

The river cuts a deep gorge in the landscape here, the only one of its kind on the Mississippi. Most of the trails follow the river from atop the bluffs.

Other trails take you through Mississippi Gorge and Minnehaha Regional Park, site of the 53-foot high Minnehaha Falls made famous in the Henry Wadsworth Longfellow poem, "The Song of Hiawatha."

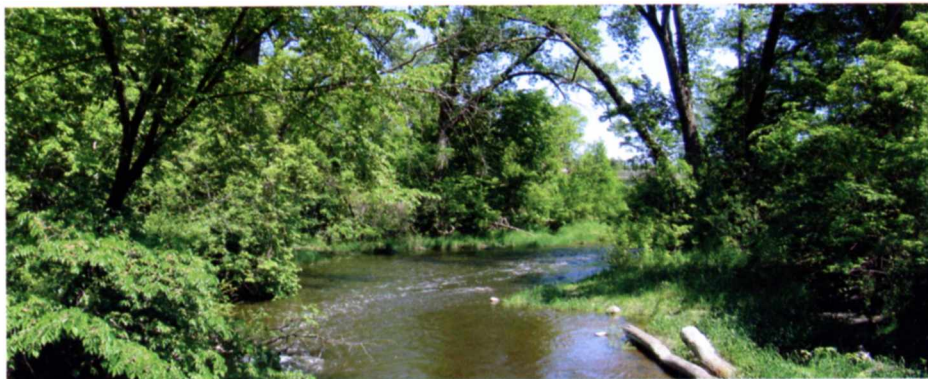
Points of interest

- 11 Manomin County Park
- 12 Banfill-Locke Center for the Arts
- 13 Islands of Peace
- 14 Riedel Farm Estate
- 15 Kroening Interpretive Center
- 16 Head of Navigation
- 17 Riverside Power Plant
- 18 Boom Island Park
- 19 Nicollet Island
- 20 Pillsbury A Mill
- 21 St. Anthony Falls & St. Anthony Lock & Dam
- 22 Water Power Park
- 23 Stone Arch Bridge
- 24 Mill City Museum & Mill City Farmer's Market
- 25 Guthrie Theater & Endless Bridge
- 26 Weisman Art Museum

River mile 862 to 861

On the water, enjoy the view of the tree-lined shore as you negotiate a few minor rapids and see lots of wildlife. The [Mississippi River Regional Trail](#) follows a railroad corridor for a stretch and passes a Northstar Commuter Rail station. It also passes by **11** [Manomin County Park](#) (862 E) on the east bank. Rice Creek flows into the Mississippi River at Manomin County Park. Rice Creek is also a canoe route that starts in Lino Lakes, Minnesota.

The **12** [Banfill-Locke Center for the Arts](#), in Manomin County Park, is a community arts center that operates a gallery and hosts a variety of arts events in a historic Greek Revival house overlooking the river.



Rice Creek, Manomin County Park. (NPS)

Getting there without the car

Bus routes serving river stops:

West	763	765	766
East	852		



Banfill-Locke Center for the Arts. (NPS)

Further down the river, the Mississippi River Trail passes through **13** [Islands of Peace Park](#) (861 E). You can see the downtown Minneapolis skyline from here.

The [Mississippi River Trail](#) on the west side of the river follows West River Road. River Park has access to the river and walking trails through a restored prairie.

River mile 860 to 857

The river changes below the **I-694 Bridge** (860.4): it's wider and straighter, and the view of the downtown Minneapolis skyline downstream is stunning. The river's last rapids are little more than riffles in this reach.

Most of the shoreline in this stretch is parkland and trails. The **Anoka County Riverfront Regional Park** (859 to 860.5 E) includes a boat ramp, picnic areas, and the **14 Riedel Farm Estate**, a farmhouse built in the 1880s and now used for special events.

Along the west bank, **North Mississippi Regional Park** (858 to 860.5 W) occupies almost the entire shoreline. The **15 Carl W. Kroening Visitor Center** offers a variety of programs. The trails link to Shingle Creek Parkway and Victory Memorial Parkway near the Camden Bridge.

The 50.1 miles of breathtaking **Grand Rounds Scenic Byway Bike Trails** in Minneapolis take you around lakes and creeks, through historic neighborhoods, past urban golf courses and expansive parks, and over and alongside the great Mississippi River (**Maps B29 to C39**).

Getting there without the car

Bus routes with river stops:

West	761	762	22
East	11		

Additional transit:

Northstar Rail Fridley Station



Boat launch at Anoka County Riverfront Regional Park. (NPS)

River mile 857 to 855

This is an industrialized reach of river, although much of that industry is dwindling and the land is gradually being converted to parks, trails, and housing.

16 The Head of Navigation (857.6), downriver from the Canadian Pacific railroad bridge, marks the point in the river at which the Army Corps of Engineers starts maintaining a minimum nine-foot-deep shipping channel. A system of 29 locks and dams is necessary to maintain the nine-foot channel to near St. Louis, where the natural river becomes deep enough to float loaded barges.

The trails on both sides follow increasingly urban streets until they pass the **Eighth Avenue (Plymouth Avenue) Bridge** (855), after which they follow trails, mostly through parks and parkways through downtown Minneapolis.

Running since 1911, the **17 Riverside Power Plant** was the oldest continuously operating coal-burning plant in the United States. It replaced a power plant that was destroyed in an explosion near St. Anthony Falls. It was built in 18 weeks using horse-drawn equipment. Xcel Energy converted the plant from coal to natural gas

Getting there without the car

Bus routes serving river stops:

West	11	32	
East	7	11	32



Canadian Pacific Railroad bridge. (NPS)

in 2009 as part of its efforts to cut emissions from coal-burning power plants in the Twin Cities. The conversion has substantially reduced the plant's sulfur dioxide, nitrogen dioxide, mercury, and particulate emissions. The plant's reduction of carbon dioxide emissions is equivalent to taking 600,000 cars off the road.

River mile 855 to 852

More than a dozen bridges span this stretch of river, connecting numerous bike and pedestrian trails. Most are open to bicyclists. Several interesting footpaths stay closer to the river than the bike paths, such as along the west bank (854.8 W) across from

18 Boom Island Park (no longer an island) and on the east bank (853.7 E) upstream from the Stone Arch Bridge.

The **St. Anthony Falls Heritage Trail** is a self-guided 1.8-mile walking tour of the St. Anthony Falls Historic District. It circles the falls via **19 Nicollet Island**, the Hennepin Avenue Bridge, and the Stone Arch Bridge. Kiosks, way markers, and signs mark the trail and tell the stories of the people and flour mill companies that created the district. Many, like the Pillsbury and Washburn A Mills are national historic landmarks.

Getting there without the car

Bus routes with river stops:

West	2	3	4	6	8	10	11	12	16	17	25	50	59	61	65	111	113	114	118	141	144		
	250	252	260	261	264	270	272	288	295	298	355	360	579	652	692	695	698	789	824	825			
East	2	3	4	6	7	8	10	11	16	17	25	50	59	61	111	113	114	115	141	144	146	250	260
	261	264	264	270	272	288	355	440	460	464	465	470	472	475	476	477	478	479	490	535	558	579	597
	652	664	665	667	668	671	672	673	675	677	680	684	690	692	695	697	698	699	756	789	824	825	

Additional transit: 🚆 Northstar Rail Target Field Station

🚆 Hiawatha/Central Corridor LRT Target Field, Warehouse, Nicollet Mall, Gov't Plaza, Metrodome, and Cedar-Riverside Stations



Urban boat builders at Boom Island Park. (NPS)

River mile 855 to 852, cont.

In the mid-to-late 1800s, a huge flour-milling industry grew along the river, led by the **20 Pillsbury A Mill** (854 W), one of the largest and most advanced flour mills in the world in its time. The millers harnessed the power of **21 St. Anthony Falls** (854).

22 Water Power Park has a great view of the falls and the river, as does the car-free **23 Stone Arch Bridge** (853.9). The falls were rapidly eroding upstream until the Army Corps of Engineers stabilized them.

The **Upper St. Anthony Falls Lock** raises and lowers boats 49 feet between the top and bottom of the falls. In its natural state, the foot of the falls was a rocky rapids,



St. Anthony Falls. (Robert J. Hurt)



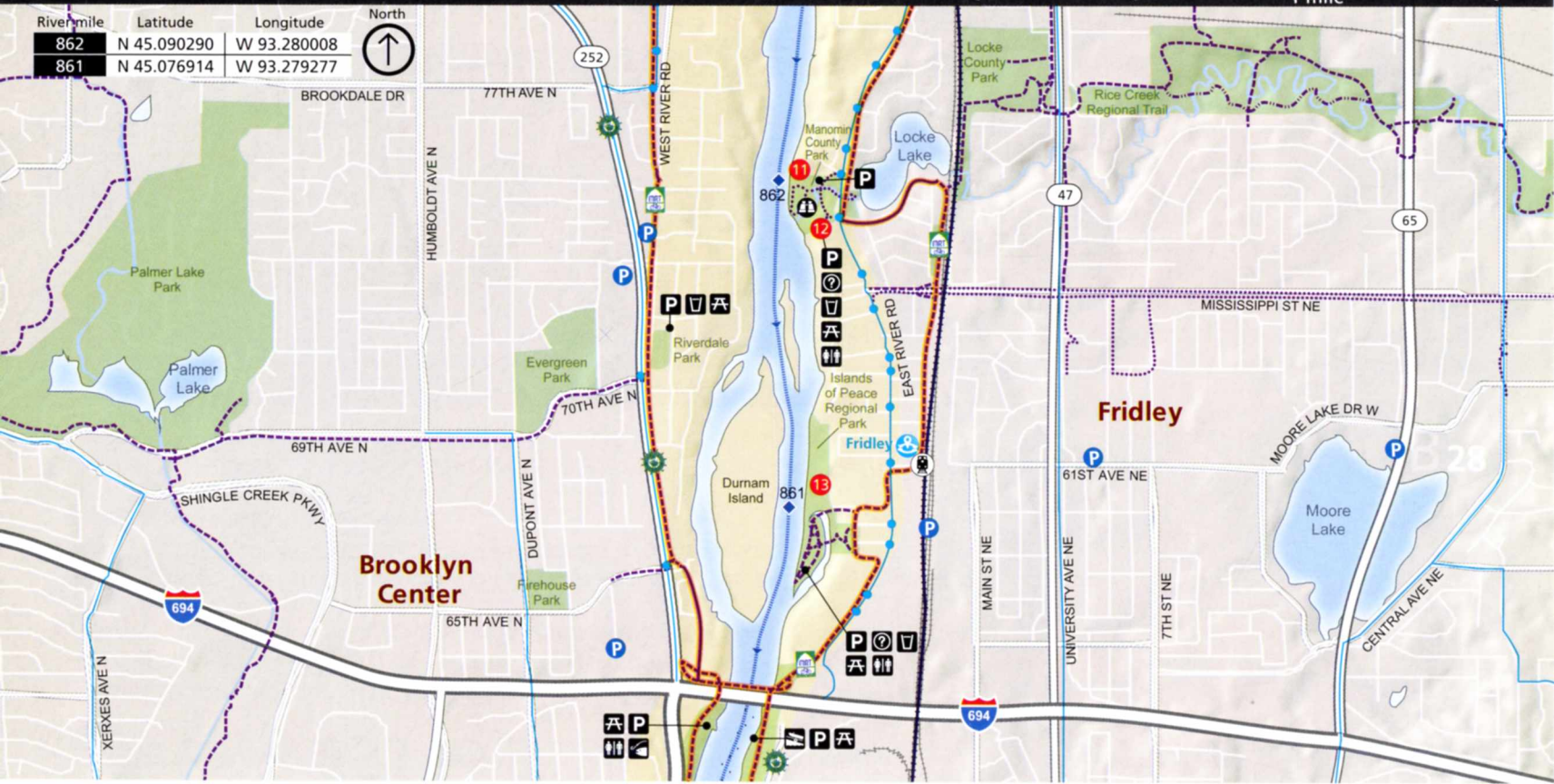
Mill Ruins Park. (NPS)

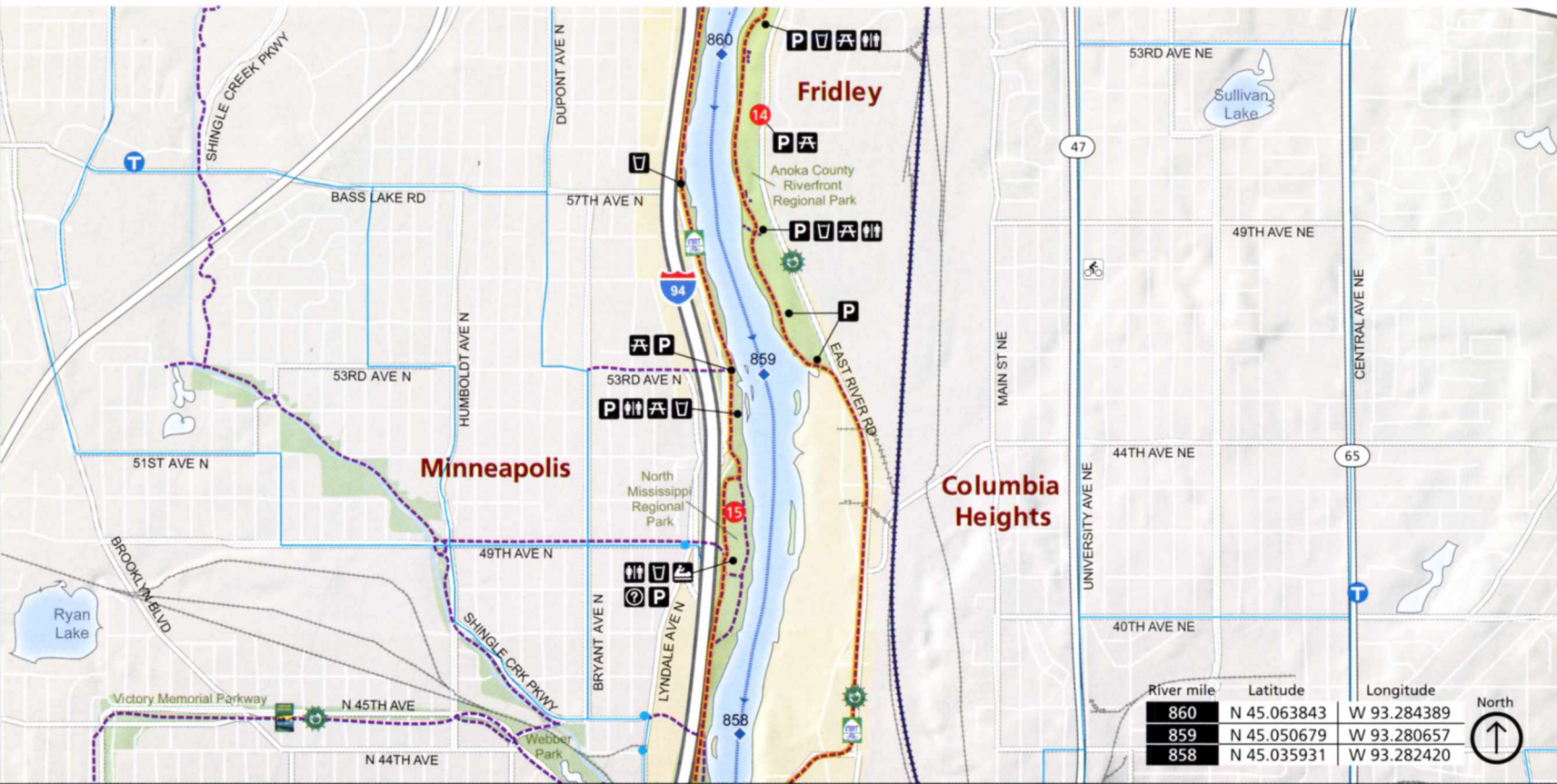
but the **Lower St. Anthony Falls Lock and Dam** (853.5) and **Lock and Dam 1** (847.6) hold water levels deep enough to maintain river shipping. Boaters on this stretch should keep an eye out for dams, locks, bridge piers, commercial traffic, and a waterfall.

There is a lot to see and do. Check out the **24 Mill City Museum** in the ruins of the Washburn A Mill (853.8W), the **25 Guthrie Theatre** (853.7W), the **26 Weisman Art Museum** at the University of Minnesota (852.7E), or go for a bike ride on a cantilevered trail over the river to **Bridal Veil Falls** (851.6)

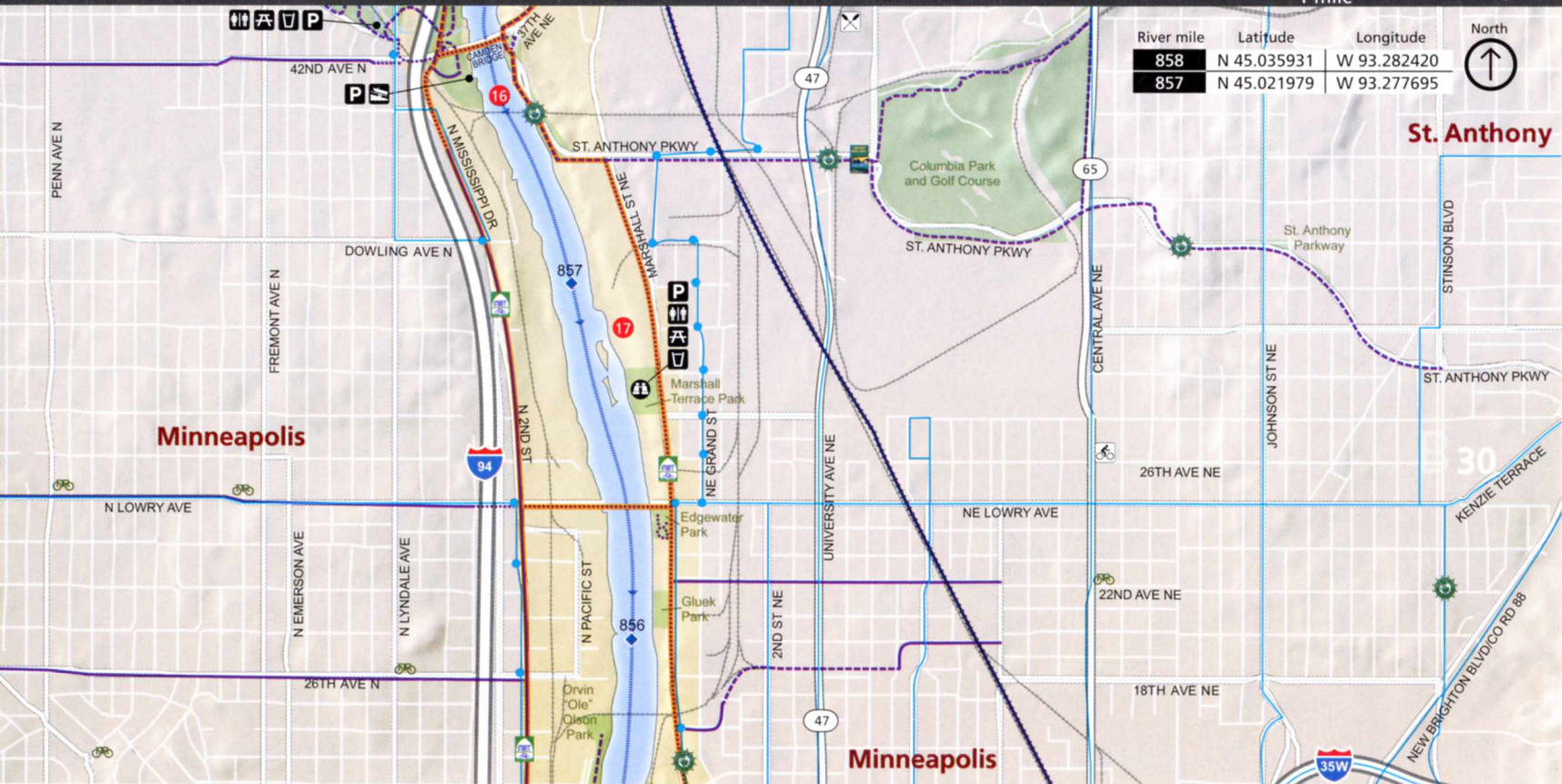
1 mile

River/mile	Latitude	Longitude
862	N 45.090290	W 93.280008
861	N 45.076914	W 93.279277





1 mile



SECTION C

32

The Gorge/Where the Rivers Meet



Historic Fort Snelling. (Minnesota Historical Society)

Here the Mississippi and Minnesota rivers converge in a series of backwater channels, islands, and floodplain forests. The confluence of these two great rivers is of special importance to the Dakota and home to a number of secluded parks, historic sites, and trails. Lose yourself in the history and nature tucked away between the Twin Cities.

Points of interest

- 27 Meeker Island Lock and Dam Ruins
- 28 Minnehaha Falls
- 29 Longfellow House
- 30 John H. Stevens House
- 31 Lock and Dam 1 Visitor Center
- 32 Coldwater Spring 
- 33 Hidden Falls Regional Park



Hidden Falls Regional Park. (NPS)

- 34 Historic Fort Snelling
- 35 Fort Snelling State Park
- 36 Sibley House
- 37 Pilot Knob
- 38 Minnesota Valley National Wildlife Refuge Visitor Center
- 39 Crosby Farm Regional Park

River mile 851 to 849

From just below St. Anthony Falls to Fort Snelling (**Map C40**) is the Mississippi River's only true gorge. Looking up at the rocky, wooded bluffs from the river, it's hard to imagine that you're in the geographic center of a metropolitan area with three million people. The bluffs are rocky and steep on both sides of the river.

Quiet, tree-lined streets parallel the bluffs on both sides, with bicycle and pedestrian trails between the streets and the bluffs. Many bicyclists use the bike lane on Mississippi River Boulevard rather than the trail. Numerous overlooks and park benches offer opportunities to relax and enjoy the views. At spots, there's good access to the river.

At the **27 Meeker Island Lock and Dam ruins**, you can see what's left of the first lock and dam on the river, built in 1907. On the downriver side a trail leads to the **East Sand Flats**. The trail continues upriver across a cantilevered trail under the I-94 Bridge to the **East River Flats**, on the University of Minnesota campus. There are spots along this stretch where a canoe or kayak could be easily pulled up onto the shore.

On the west side of the river, the pedestrian-only **Winchell**

Getting there without the car

Bus routes serving river stops:

West	9	21	23
East	63	21	134 53



Meeker Island lock wall. (NPS)

Trail follows the route of an old American Indian trail between the blufftop and the river. In places it is little more than a foot path, sometimes a steep one. The earthen trail on the upstream end of the trail cuts close to the edge, while on the downstream end the trail is paved and fenced away from the steep spots.

Access to the river on the west side can be found across from the Midtown Greenway trailhead and via stone steps near 34th Street. A restored oak savanna near 36th Street is a popular place to explore.

River mile 848 to 846

The deep river gorge disappears as the Mississippi approaches its confluence with the Minnesota River. **Minnehaha Regional Park** (847 to 847.6 W) features the dramatic **28 Minnehaha Falls** where Minnehaha Creek spills over a cliff, tumbling 53 feet into a gorge. Below the falls there is a pedestrian path that follows the creek down to a sandy beach.

Minnehaha Park is home to the historic **29 Longfellow House**, built in 1906 as a 2/3 scale replica of Henry Wadsworth Longfellow's house in Cambridge, Massachusetts. The Longfellow House has information about historic and current park features.

The historic **30 John H. Stevens House** was originally built in 1849 beside St. Anthony Falls, and is believed to be the first home built west of the Mississippi in Minneapolis. Relocated into Minnehaha Park, the house offers visitors an opportunity to explore the rich history of Minneapolis.

31 Lock and Dam 1 (847.6) was built by the Army Corps of Engineers in 1917. In 1923, Ford Motor Company added a hydroelectric station to generate electricity for its assembly plant, which closed in 2011. The Army Corps of Engineers operates an observation area on the west side, where you can watch boats lock through. The road to the lock and dam begins where West River Parkway becomes Godfrey Parkway, on the upriver side of the Ford Parkway Bridge.

Getting there without the car

Bus routes with river stops:

West	23	46	74	84		
East	23	43	46	70	74	84

Additional transit:

Hiawatha LRT 46th St, 50th St, VA Medical Center, and Fort Snelling Stations



Minnehaha Falls In Minnehaha Regional Park. (NPS)

River mile 846 to 845

In this stretch, the Mississippi swallows up the turbid waters of the Minnesota River. **32 Coldwater Spring** is just above the Mississippi River's confluence with the Minnesota River between Minneapolis and Saint Paul. In 1820, soldiers camped at Coldwater Spring and began building Fort Snelling at the confluence.

33 Hidden Falls Regional Park (845.4 to 847.4 E) includes tall cottonwoods in floodplain forests, which become common below the gorge.



Historic Fort Snelling, circa 1900. (Minnesota Historical Society)

Getting there without the car

Bus routes serving river stops:

North	46	54	84
South	417		

Additional transit:

Hiawatha LRT Fort
Snelling Station



Fort Snelling overlooks the confluence. (NPS)

34 Historic Fort Snelling (845.5 W), once the seat of settlement military power, crowns the blufftop overlooking the confluence. Originally completed in 1825, the restored fort is operated by the Minnesota Historical Society.



Fort Snelling State Park. (NPS)

Downstream from Pike Island you can sometimes distinguish the brown water of the Minnesota River from the clearer water of the Mississippi. Hundreds of acres of public lands and many miles of trails occupy the floodplain forest here, providing opportunities for viewing wildlife, hiking, biking, or for an urban river boating experience.

River pilots once used the high hill known as **37 Pilot Knob** (Minnesota River mile 2 W) as a landmark, which is being restored to oak savanna. The Dakota people buried their dead here. The Big River Regional Trail connects with historic Pilot Knob.

River mile 845 to 844

Pike Island (844.8 W) is named after Lieutenant Zebulon Pike, who in 1805 purchased land from the Dakota for a U.S. fort on the bluff. The Dakota called it **Wita Tanka**.

Pike Island and much of the land near the fort and on the Minnesota River is part of **35 Fort Snelling State Park**. The island's pedestrian trail is popular with birders and wildlife watchers. The island's backwater channel can flow in either direction.

Young Henry Sibley began building the **36 Sibley House** (Minnesota river mile 1.2 W) in 1838, after he came here to work as a regional manager for the American Fur Company. He later became the first governor of Minnesota. The Minnesota Historical Society gives tours of the house and other restored historic buildings on the site.



Sibley House. (NPS)

River mile 844 to 843

The **Sibley Trail** connects the **38 Minnesota Valley National Wildlife Refuge**, which begins upriver from I-494, to Fort Snelling State Park. Trails from the Minnesota Valley Visitor Center connect to Minnehaha Regional Park and Big River Regional Trail.

Eleven thousand years ago glacial meltwater poured across southern Minnesota and carved a huge valley. Within it, today's Minnesota River appears small.

Trails link Hidden Falls Regional Park with **39 Crosby Farm Regional Park**. Crosby Farm Park's trails meander near two small backwater lakes, sandy beaches, a wetland, and through floodplain forests.



Crosby Farm Regional Park. (NPS)

Getting there without the car

Bus routes serving river stops:

North	46	54	84
South	417		

Additional transit:

 Hiawatha LRT Fort Snelling Station



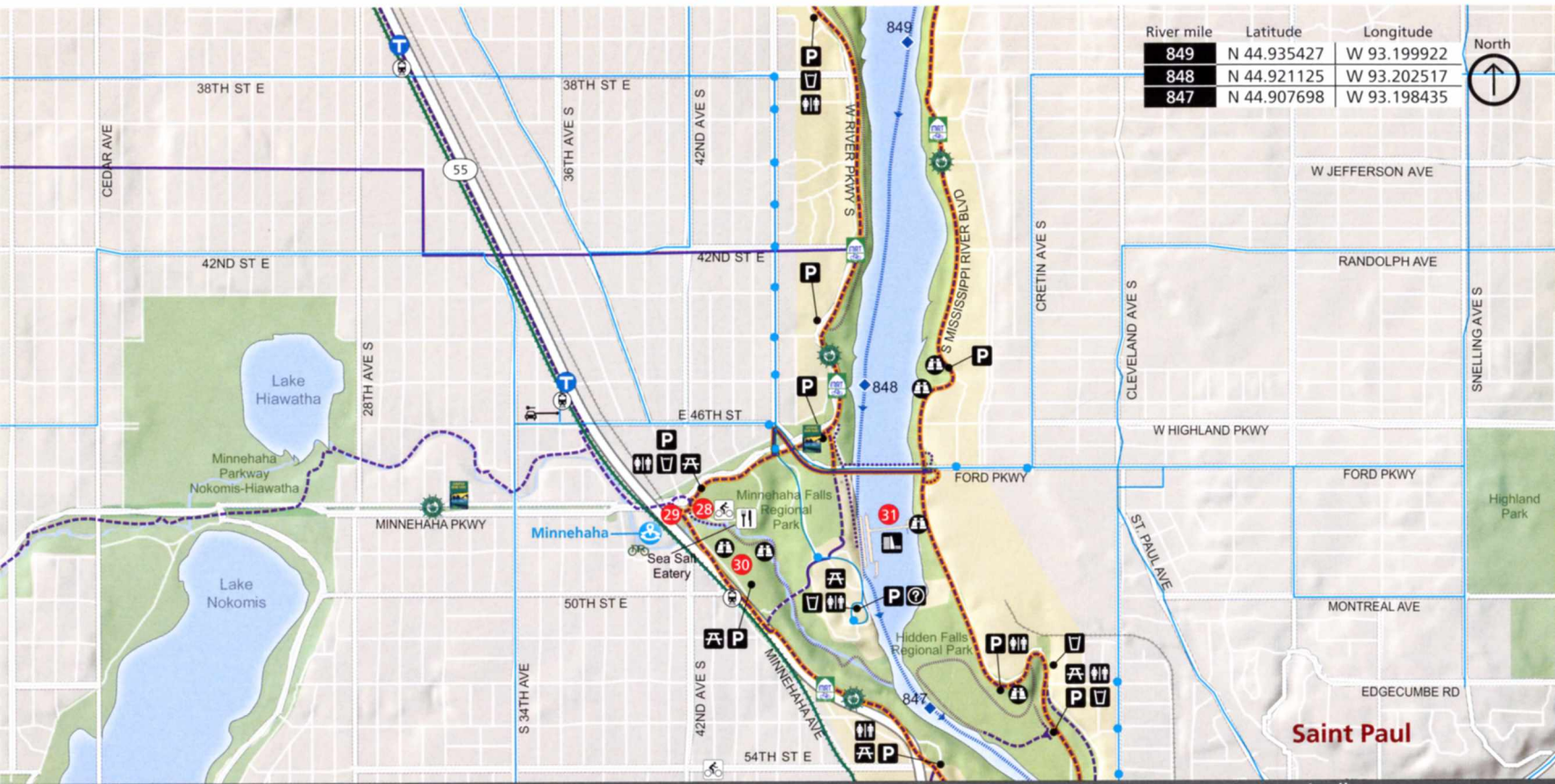
Bird watching in Crosby Farm Regional Park. (NPS)

The **Big Rivers Regional Trail** follows the west bank of the river through floodplain forests. It was selected as one of the most scenic rail trails in the country by the Rails to Trails Conservancy. It offers spectacular views of the confluence of the Minnesota and Mississippi rivers.

The **Minnesota River** (843.9 W) within Fort Snelling State Park contains many backwater lakes and wetlands. The 332-mile-long river begins at Big Stone Lake, on the Minnesota-South Dakota Border.

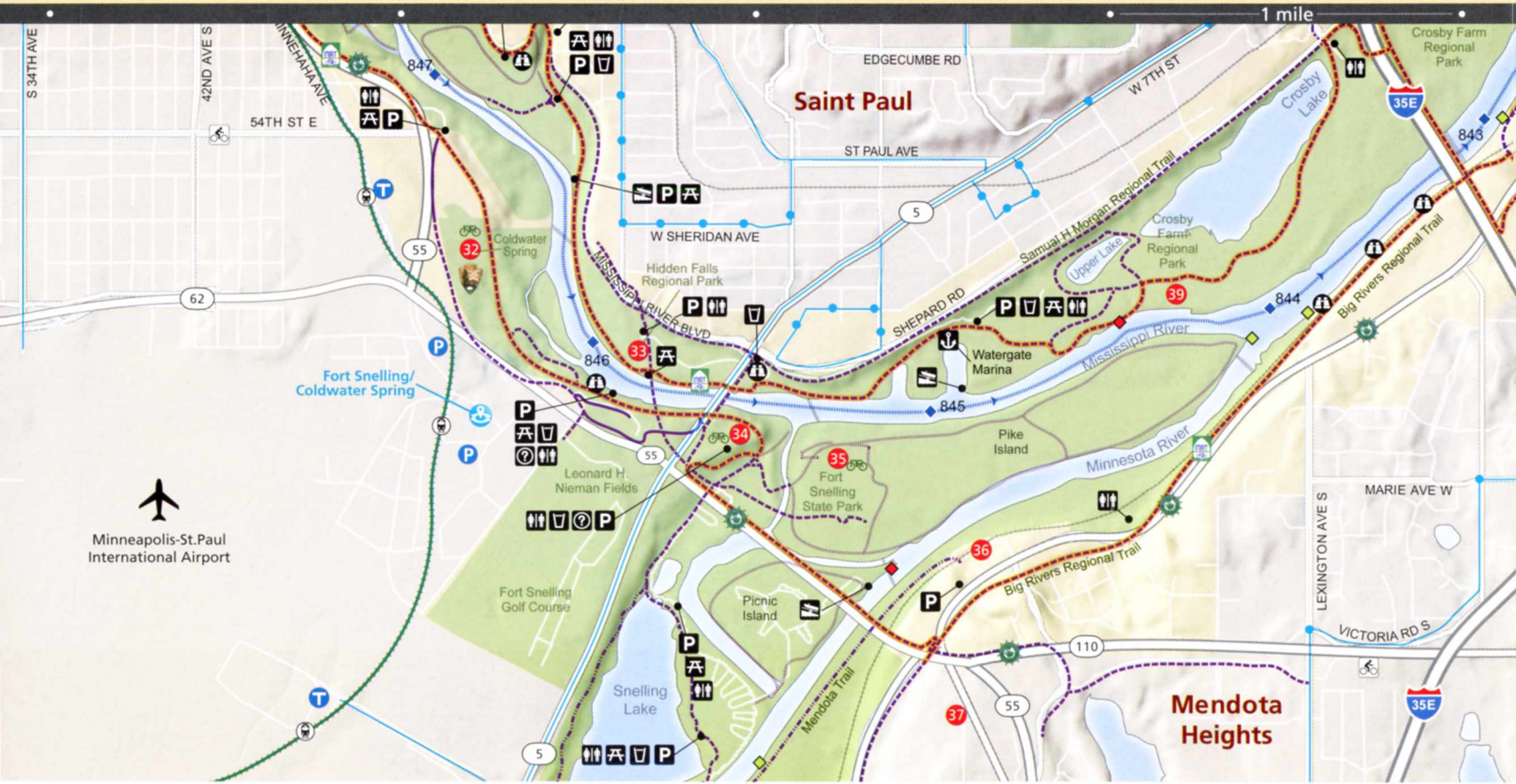
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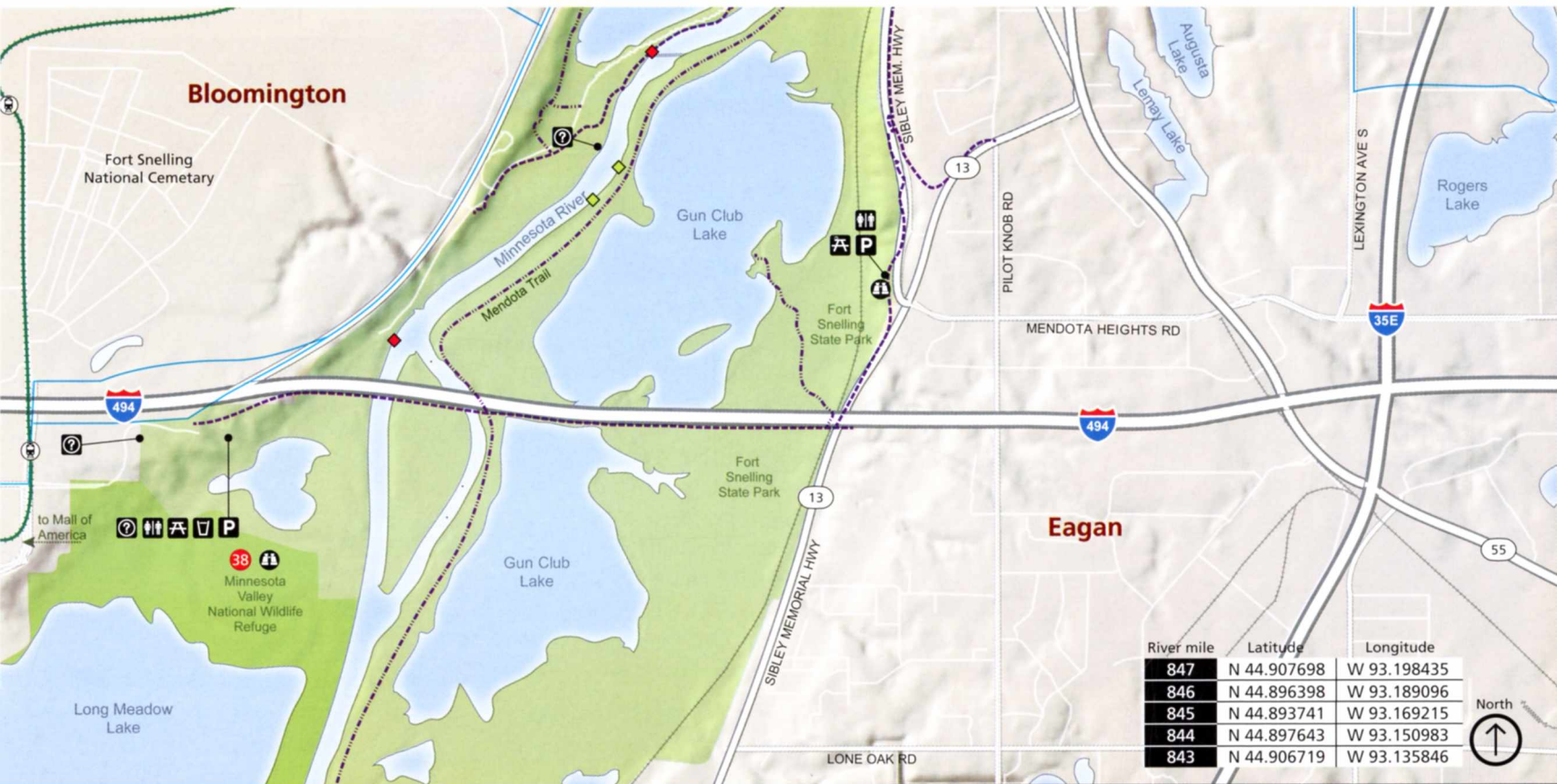




Saint Paul

1 mile





River mile	Latitude	Longitude
847	N 44.907698	W 93.198435
846	N 44.896398	W 93.189096
845	N 44.893741	W 93.169215
844	N 44.897643	W 93.150983
843	N 44.906719	W 93.135846

SECTION D The Working River

42



Downtown Saint Paul skyline. (NPS)

Experience peaceful trails within sight of downtown and secluded paths along sandy river flats. Saint Paul is home to more miles of Mississippi River than any other municipality along the entire length of river. Watch towboats at work pushing 1,500-ton barges along the Mississippi River on a trail easily accessible from downtown Saint Paul.

In the 1800s, Lamberts Landing served as one of the busiest steamboat landings in the country. Venture away from the river for a



Harriet Island Regional Park. (NPS)

quiet trail along Battle Creek, or you can see ancient burial mounds and a breathtaking view of the city at Indian Mounds Park.

Points of interest

- 40 Lilydale Regional Park
- 41 Harriet Island Regional Park
- 42 City House
- 43 Mississippi River Visitor Center in the Science Museum of Minnesota
- 44 Raspberry Island
- 45 Mississippi National River and Recreation Area Headquarters
- 46 Bruce Vento Nature Sanctuary
- 47 Indian Mounds Regional Park
- 48 Battle Creek Regional Park
- 49 Kaposia Landing
- 50 Pigs Eye Scientific and Natural Area

River mile 843 to 841

The river here picks up speed a bit, and you're more likely to encounter barge traffic than you were upriver. You can peek at blufftop neighborhoods, but the river valley is all undeveloped parkland that looks wild and natural from the water.

The **Big Rivers Regional Trail** connects **40 Lilydale Regional Park** (841.3 to 843 W) to **41 Harriet Island Regional Park** (839.5 to 840.5 W) and downtown Saint Paul (**Map D46**). Harriet Island offers excursion boat rides, a restored pavilion, trails, wide open spaces, and views of the river and downtown.

The historic **42 City House**, built in 1931, was once a municipal grain elevator. It has now been restored as a park pavilion situated on piers out over the Mississippi River.

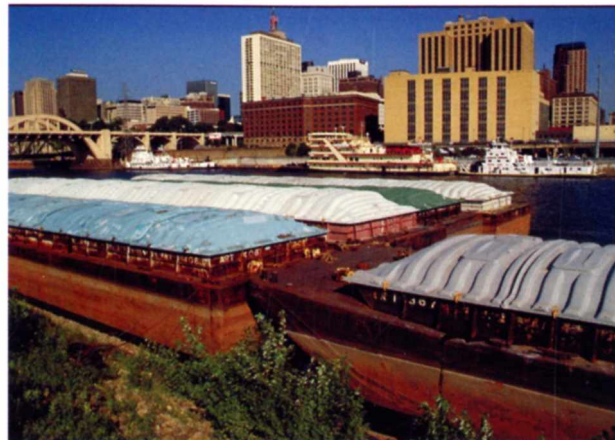


Pickerel Lake, Lilydale Regional Park. (NPS)

Getting there without the car

Bus routes serving river stops:

North/West	54	70	74
South/East	417	67	



Barges in downtown Saint Paul. (NPS)

Walking trails and benches provide great views of downtown Saint Paul and the Cathedral of Saint Paul from **Cherokee Regional Park** (840.5 to 841.3 W).

Saint Paul's Great River Passage Master Plan aims to connect 17 miles of riverfront via parks, trails, and neighborhoods.

River mile 840 to 837

Currents, tows, excursion boats, and bridge abutments require alert boating in the Saint Paul downtown stretch of the river. This is where the Mississippi opens up into the broad valley it will occupy all the way to St. Louis.

Park rangers at the **43 Mississippi River Visitor Center** (839.7 E), located in the **Science Museum of Minnesota**, provide information and answer questions about this national park and other national parks. The visitor center also offers educational displays and literature.

Saint Paul Yacht Club marinas are at both ends of Harriet Island. The marina near the Wabasha Street Bridge has a public dock.

A vibrant downtown Saint Paul sits on a bluff above the river. Paddlewheelers once lined the shore here. The park on the bluff downtown, along **East Kellogg Boulevard** (839.2 to 839.5 E), is a good spot to view the working river, **44 Raspberry Island** (839.5), the **Union Pacific Railroad lift bridge** (839.3), and the other bridges.

45 The Mississippi National River and Recreation Area Headquarters is located nearby on Kellogg Boulevard.

Getting there without the car

Bus routes serving river stops:

North	3	16	21	53	54	61	63	64	65	68	70	71	74	75	94
	265	275	285	294	350	351	353	361	364	417	480	484	489	860	
South	67	68	71	75	94										



Raspberry Island. (NPS)

Separating downtown from historic Dayton's Bluff is a valley containing the **46 Bruce Vento Nature Sanctuary**. **47 Indian Mounds Regional Park**, on the bluffs, contains large Hopewell mounds and offers a grand view up and down the river.

River mile 836 to 833

The Mississippi River Trail skirts the border of **48 Battle Creek Regional Park** then follows Point Douglas Road.

The North Urban Regional Trail (map D49) connects **49 Kaposia Landing** (834.8 to 835.7 W), an 85-acre park named after a Dakota village that was at this site, with the Big River Regional Trail in **40 Lilydale Regional Park** (map D47).

Looking north from the river you can see the skyline of downtown Saint Paul, but as you continue south, the city view disappears and gives way to natural floodplain forests, islands, backwaters, and some of the most diverse bird life found anywhere in the Park.

Pigs Eye Lake is full of aquatic plants and waterfowl, and is a nice diversion from the main channel.

50 Pigs Eye Scientific and Natural Area (834 E) contains a large heron rookery and is closed during bird nesting season (spring/summer). This rookery is the Upper Midwest's largest and most diverse colonial nesting site. In addition to great blue herons and great egrets, little blue herons, black-crowned and yellow-crowned night herons, and double-crested cormorants nest in this area.

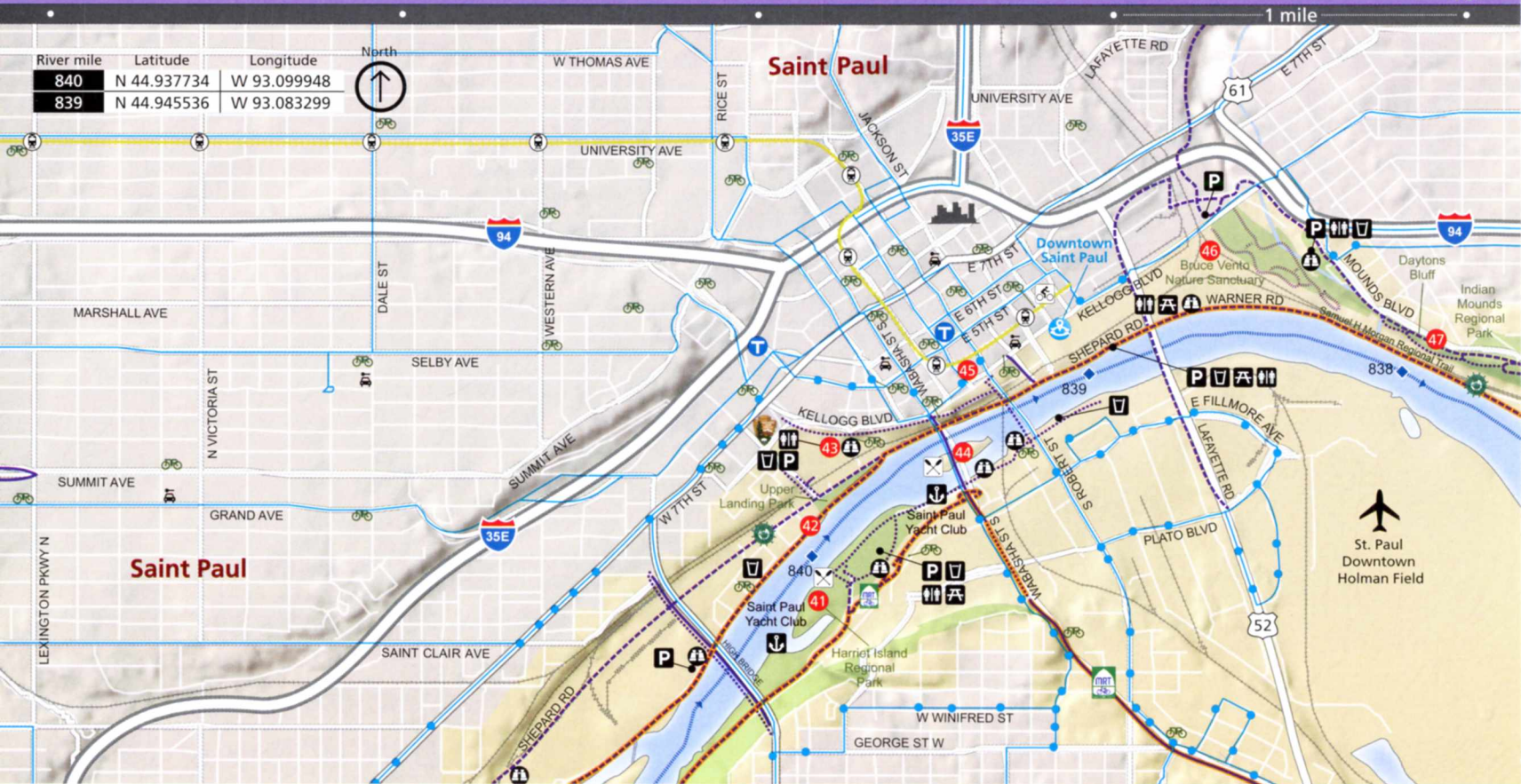
Getting there without the car

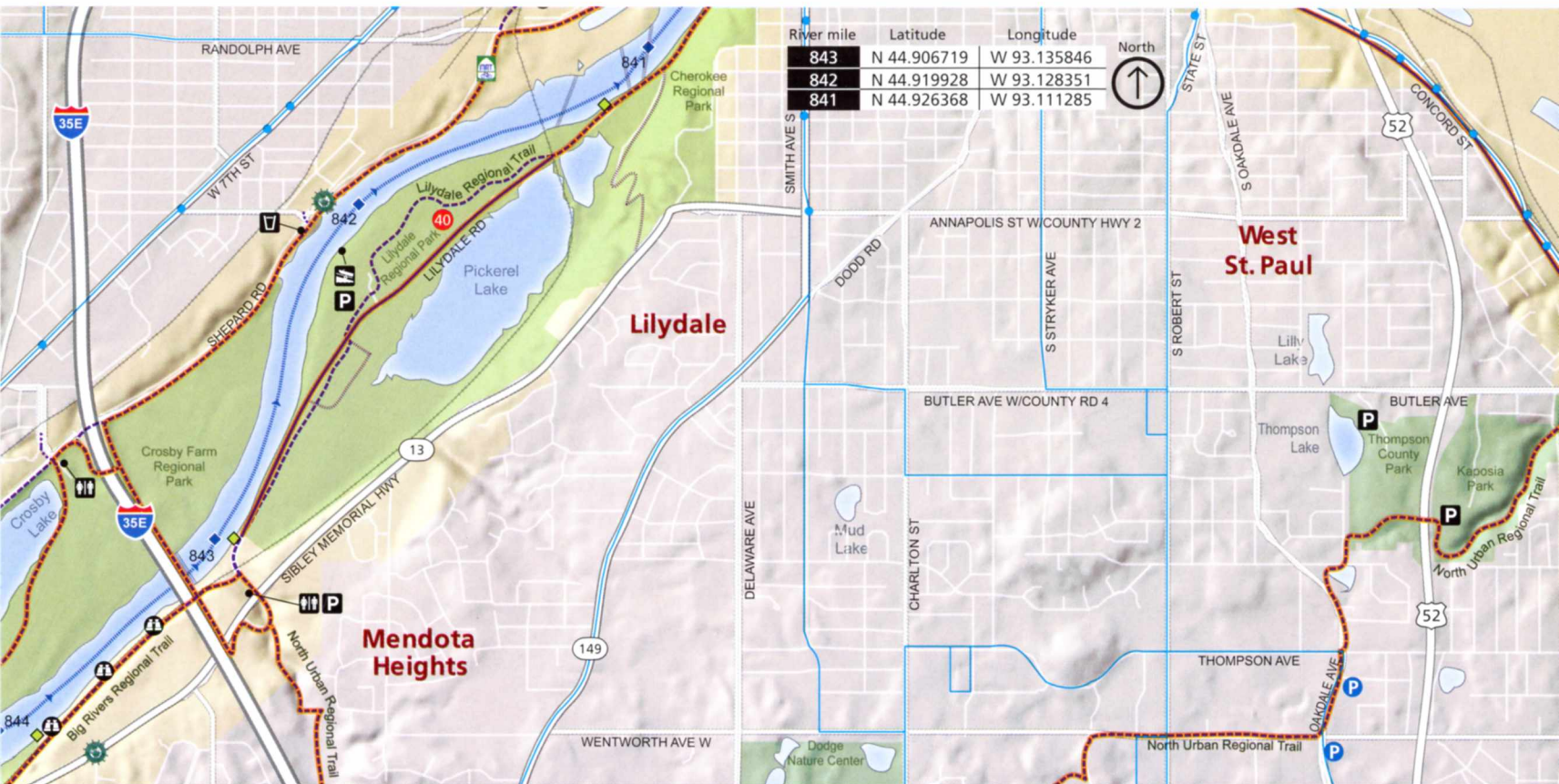
Bus routes serving river stops:

West	68	71		
East	63	350	361	365

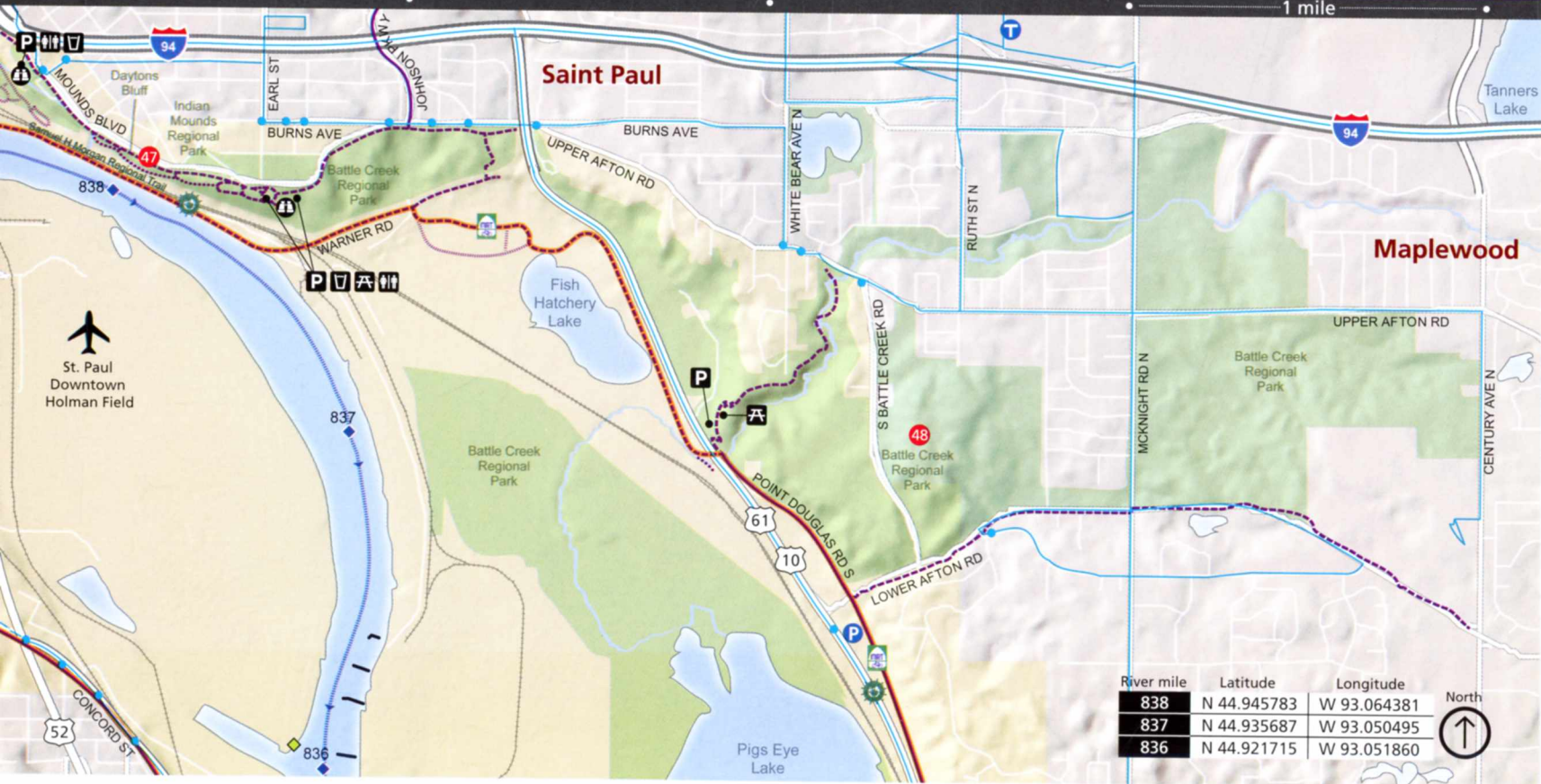


Great egret nest. (Courtesy of Audubon)





River mile	Latitude	Longitude	North
843	N 44.906719	W 93.135846	
842	N 44.919928	W 93.128351	
841	N 44.926368	W 93.111285	





River mile	Latitude	Longitude
835	N 44.909676	W 93.044166
834	N 44.898084	W 93.033990
833	N 44.889473	W 93.018574



Woodbury

South
St. Paul

1 mile

SECTION E The Forested Floodplain

50



Robinson Rocks near river mile 827 (Grey Cloud Island shore). (NPS)

South Saint Paul's levee trail showcases nature and industry coexisting much like it has for years. A heaving train slows to a stop as you watch the river meander around picturesque islands. A great blue heron stands at water's edge, across from the former stockyards, now a revitalized business park.

Points of interest

- 51 Historic Rock Island Swing Bridge
- 52 Lions Levee Park
- 53 Riverside Park
- 54 Upper Grey Cloud Island
- 55 Pine Bend Bluffs Scientific and Natural Area
- 56 Lower Grey Cloud Island
- 57 Grey Cloud Dunes Scientific and Natural Area
- 58 Schaars Bluff
- 59 Spring Lake Park Reserve
- 60 Lock and Dam 2
- 61 Hastings River Flats
- 62 Lake Rebecca Park
- 63 Veterans Memorial Levee Park
- 64 Lower St. Croix Wild and Scenic River
- 65 Point Douglas Park
- 66 Freedom Park and Great River Road Visitor Center
- 67 Gore's Pool Wildlife Management Area
- 68 Vermillion River Bottoms

The river widens below South Saint Paul. The bluffs are higher, and there are numerous islands and backwater channels. You'll see barges pushing their loads in the 9-foot navigation channel. In Hastings, find spectacular views and historic rivertown charm.

River mile 832 to 831

A levee and a recreational trail follow the river in South Saint Paul, where stockyards once existed along the river upstream from the **Wakota (1-494) Bridge** (832.4). At one time South Saint Paul was home to the largest stockyards in the world.

Below the Wakota Bridge the river turns natural again. This is a great place to watch for bald eagles, pelicans, and shorebirds.

After following the **South Saint Paul Riverfront Trail** on the levee along the west side of the river, the **Mississippi River Trail** moves inland to follow Concord Street South.



One of many Mississippi River islands. (NPS)

🔄 Getting there without the car

Bus routes serving river stops:

West	71
East	364



South Saint Paul Riverfront Trail. (NPS)

On the east side of the river, the **Mississippi River Trail** follows Highway 61 to Cottage Grove, where it cuts southwest to follow Summit Avenue through Saint Paul Park to Pullman Avenue (**Map E60**).

River mile 830 to 828

The large **oil refinery** (830.1 E) reminds us of the river's industrial importance, but much of this reach is wild. The double-decker **51 Rock Island Swing Bridge** (830.3), built in 1895, used to carry trains and cars across the river just upstream from the refinery. The bridge was closed in 1999, and all but the west approach was removed in 2009. The remaining section of this historic bridge was converted into a recreational pier.

The many islands make for great backwater canoeing here. The channel along the east side of the river below **52 Lions Levee Park** (829.7 E) is very scenic. Watch for egrets, eagles, and evidence of beavers. Several protected marinas provide access to the main channel.

53 Riverside Park is being restored to native woodland and oak savanna and has nice walking trails.

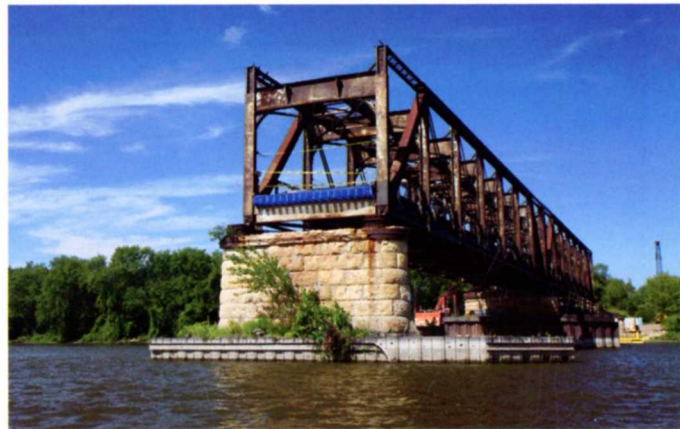


Rock Island Swing Bridge. (NPS)

Getting there without the car

Bus routes serving river stops:

West	68	71
East	364	



Rock Island Swing Bridge Pier. (NPS)

The west **Mississippi River Trail** follows 80th Street East through Rosemount, and enters Hastings on 160th Street East. It eventually will follow the river through **Spring Lake Regional Park 59** in Rosemount. The east Mississippi River Trail passes through Saint Paul Park on Summit Ave before turning toward the river on Pullman Ave.

River mile 827 to 825

With towering bluffs in the background and complex backwaters to explore, this reach resembles areas a hundred miles downriver.

River Lake is a good place to watch white pelicans in the spring and fall.

The rocky bluffs along the shore of **54 Upper Grey Cloud Island** are named after Jane Muckle Robinson, who tended the navigation lights on this stretch of the river from 1885 to 1921.

Grey Cloud Channel (827.6 E) is an interesting backwater to explore. However, the channel does not connect Mooers Lake and the Mississippi River, because a road blocks the upper end of the channel. It cannot be portaged without trespassing on private land.



View from Pine Bend Bluffs Scenic and Natural Area. (NPS)

Getting there without the car

No bus routes currently serve the river in this area, but the MRT travels along the left descending bank while the Great River Road travels along the right descending bank.



White pelicans on River Lake. (NPS)

Visit **55 Pine Bend Bluffs Scientific and Natural Area** to get a great view of **Upper and Lower Grey Cloud Island**. Exit highways 52/55 on 117th St. E. Take 117th St. E. east to the service road. Follow the service road north to 111th St. E. Park and walk east on 111th St. E. to the end. Follow the path to the right.

River mile 824 to 819

Baldwin Lake (822.5 to 825.5 E) provides excellent backwater paddling and birdwatching. Eagles are frequently seen in the treetops and fishing in the main channel.

Large volumes of sand and gravel are mined on **56 Lower Grey Cloud Island** (821 to 825 E). Most of it is shipped out on barges. **57 Grey Cloud Dunes Scientific and Natural Area** (821 E) is a 220-acre preserve popular with birders and hikers.

The Mississippi River Trail route passes through Cottage Grove to Highway 61. Before it crosses the river to enter Hastings, one branch splits off to follow Highway 10 to Prescott, Wisconsin.



Spring Lake. (NPS)

Getting there without the car

No bus routes currently serve the river in this area, but the MRT travels along the left descending bank while the Great River Road travels along the right descending bank.



Grey Cloud Dunes Scientific and Natural Area. (NPS)

Spring Lake (815.2 to 823 W) is a broad and windswept backwater, but be careful—before Lock and Dam 2 was built, it was a floodplain forest and those stumps are still there, just below the surface. Be careful when boating!

River mile 819 to 816

Towering bluffs drop straight into the river here, and the river itself is broad and often windy. Outside the channel, most of the river's biodiversity has been lost and all that's left is a vast, shallow lake, but fishing is still good. **Spring Lake** was named for the springs along the base of the bluffs along its south shore.

There are wonderful views of the river from **58 Schaars Bluff** in the **59 Spring Lake Park Reserve** (822 W). The Schaars Bluff Cultural Center and a marked interpretative trail tell of the different cultures who have lived around Spring Lake for thousands of years.

Ignatius L. Donnelly, a popular author and political figure in the 19th century, tried to start a utopian community at **Nininger** (817.7 W) in 1857. The experiment failed. Now the only traces of the community are a few buildings and two interpretive signs.

This stretch of the river was dominated by bottomland forest before Lock and Dam 2 flooded them. The stumps remain, presenting an underwater hazard to boaters.

Getting there without the car

No bus routes currently serve the river in this area, but the MRT travels along the left descending bank while the Great River Road travels along the right descending bank.



Schaars Bluff, Spring Lake Regional Park. (NPS)

River mile 816 to 813

60 **Lock and Dam 2** (815.2) connects the high bluffs on either side of the river here.

61 **Hastings River Flats Park**, between the river and Lake Rebecca, offers excellent prairie wildflower and waterfowl viewing.

62 **Lake Rebecca** is a pretty backwater area maintained as a city park. Marinas dot the Hastings area. Hastings is a true river town and a popular boating and biking destination. Downstream of the lock and dam, note the extraordinary old **Canadian Pacific Lift Bridge** (813.7) from **63** **Veterans Memorial Levee Park**, which includes a granite stone monument memorializing six wars fought by American soldiers.

A nice trail begins on the levee downtown and follows the river to **Lake Rebecca Park**, past the lock and dam, and up the hill to the ridge.

The **Mississippi River Trail** also connects to Hastings from the west on a trail along the south side of the Vermillion River.

Getting there without the car

No bus routes currently serve the river in this area, but the MRT travels along both sides of the river while the Great River Road travels along the right descending bank.



Veteran's Memorial Levee Park (NPS)

River mile 814 to 811

Just below Hastings the river valley opens up into a broad floodplain between towering wooded bluffs. **64 The Lower St. Croix National Scenic Riverway** (811.5 E), administered by the National Park Service, enters the Mississippi at Prescott, Wisconsin.

Here, the great Mississippi for the first time forms the border between Minnesota and Wisconsin. Before the waters of the two rivers intermingle, you can often see the sediment-clouded waters of the Mississippi running side-by-side with the darker, clearer waters of the St. Croix.



Great River Road Visitor Center & Freedom Park. (NPS)

🕒 Getting there without the car

No bus routes currently serve the river in this area, but the MRT travels along both sides of the river while the Great River Road travels along the right descending bank.



St. Croix River. (NPS)

65 Point Douglas Park is a popular swimming beach and boating destination in summer.

The **66 Great River Road Visitor Center at Freedom Park** in Prescott, Wisconsin, offers exhibits, information, and outstanding views of the confluence of the Mississippi and St. Croix rivers.

River mile 811 to 809

The Mississippi hugs the foot of the Wisconsin bluffs here, while the tiny Vermillion River runs along the base of the bluffs on the Minnesota side. Between them lies a vast floodplain forest with many wetlands, backwater areas, and old oxbow channels.

The Vermillion River is small in comparison to the Mississippi River, which is attractive to many paddlers. It is also popular with fishermen and birdwatchers. Check water levels before you go and beware of closing dams on the channels. They are dangerous in high water. The Minnesota Department of Natural Resources maintains two boat launches.

The **67 Gore's Pool Wildlife Management Area**, located along the west side of the Mississippi River, offers opportunities for fishing and boating as well as a large, unbroken area of floodplain forest ideal for wildlife preservation.



Vermillion River Bottoms and Mud Hen Lake. (NPS)

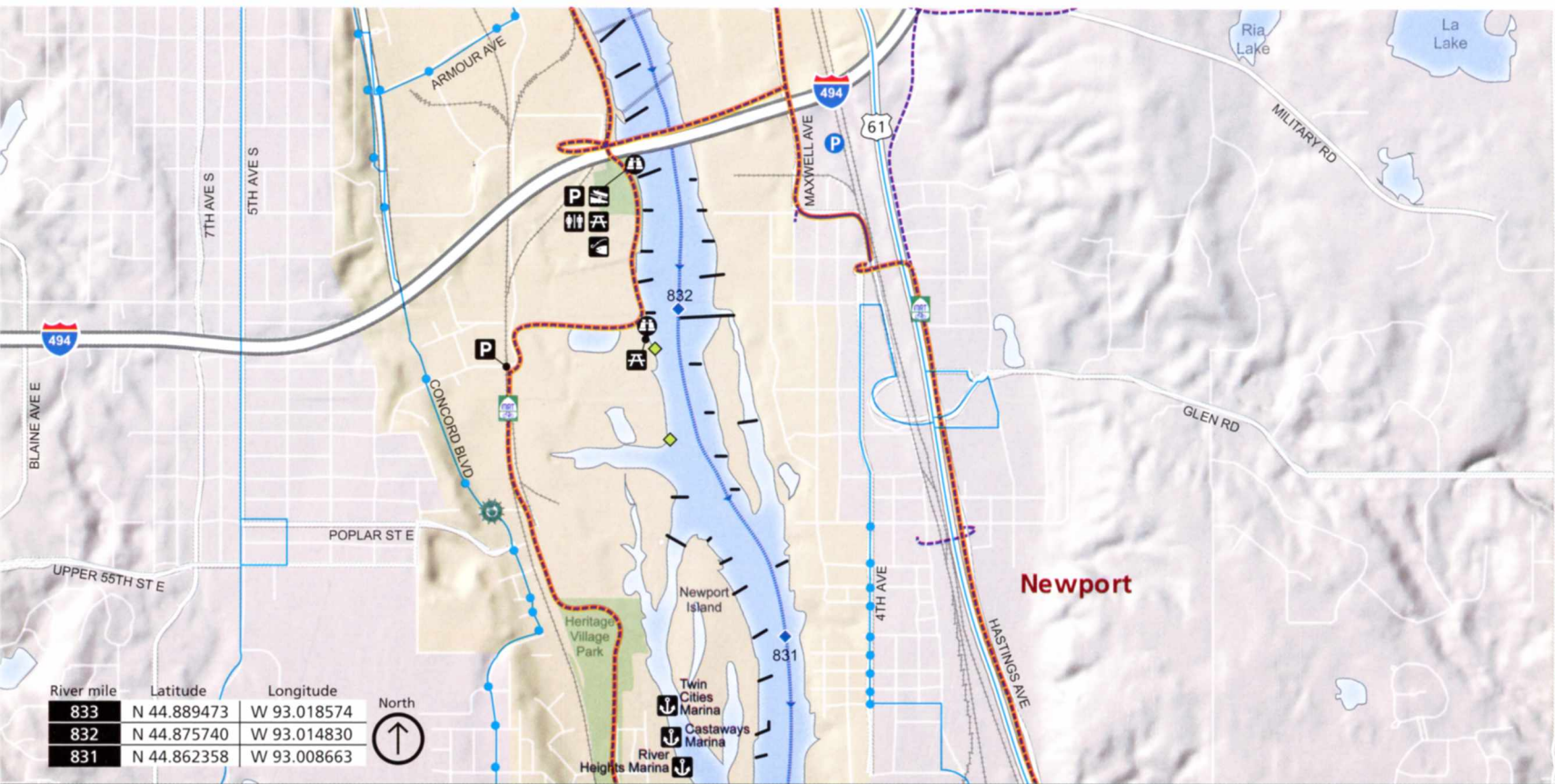
Getting there without the car

No bus routes currently serve the river in this area, but the MRT and Great River Road join to travel together along the right descending bank.



Boat launch on the Vermillion River. (NPS)

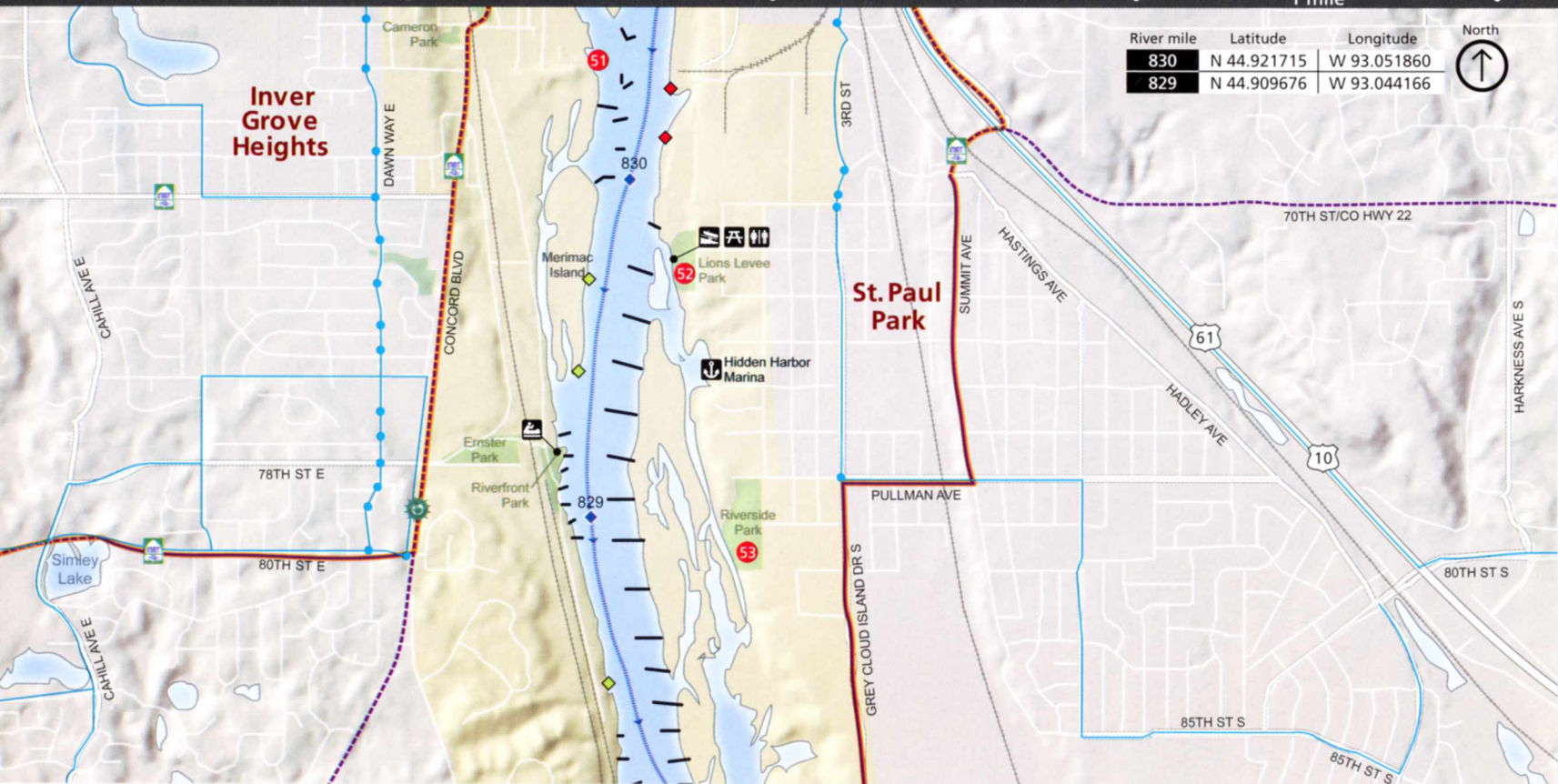
The **68 Vermillion River Bottoms**, one of the most beautiful and untouched areas of the Mississippi National River and Recreation Area, is a wonderful example of floodplain forest as it must once have been from Itasca to the Gulf of Mexico. Ravenna Trail (Highway 54) and Wisconsin Highway 35 provide scenic rural stretches for driving and biking the MRT.

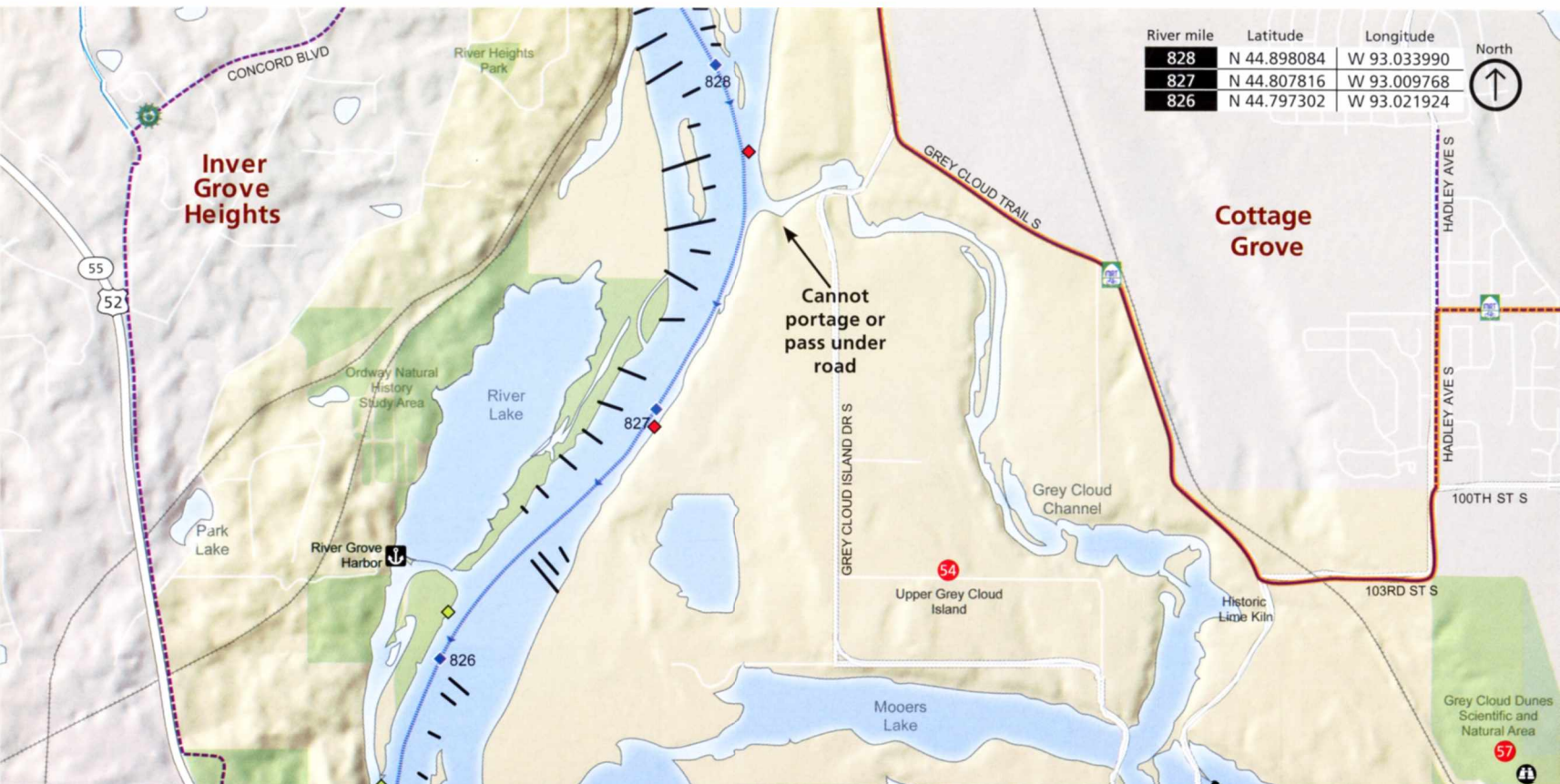


River mile	Latitude	Longitude
833	N 44.889473	W 93.018574
832	N 44.875740	W 93.014830
831	N 44.862358	W 93.008663



1 mile





River mile	Latitude	Longitude
828	N 44.898084	W 93.033990
827	N 44.807816	W 93.009768
826	N 44.797302	W 93.021924

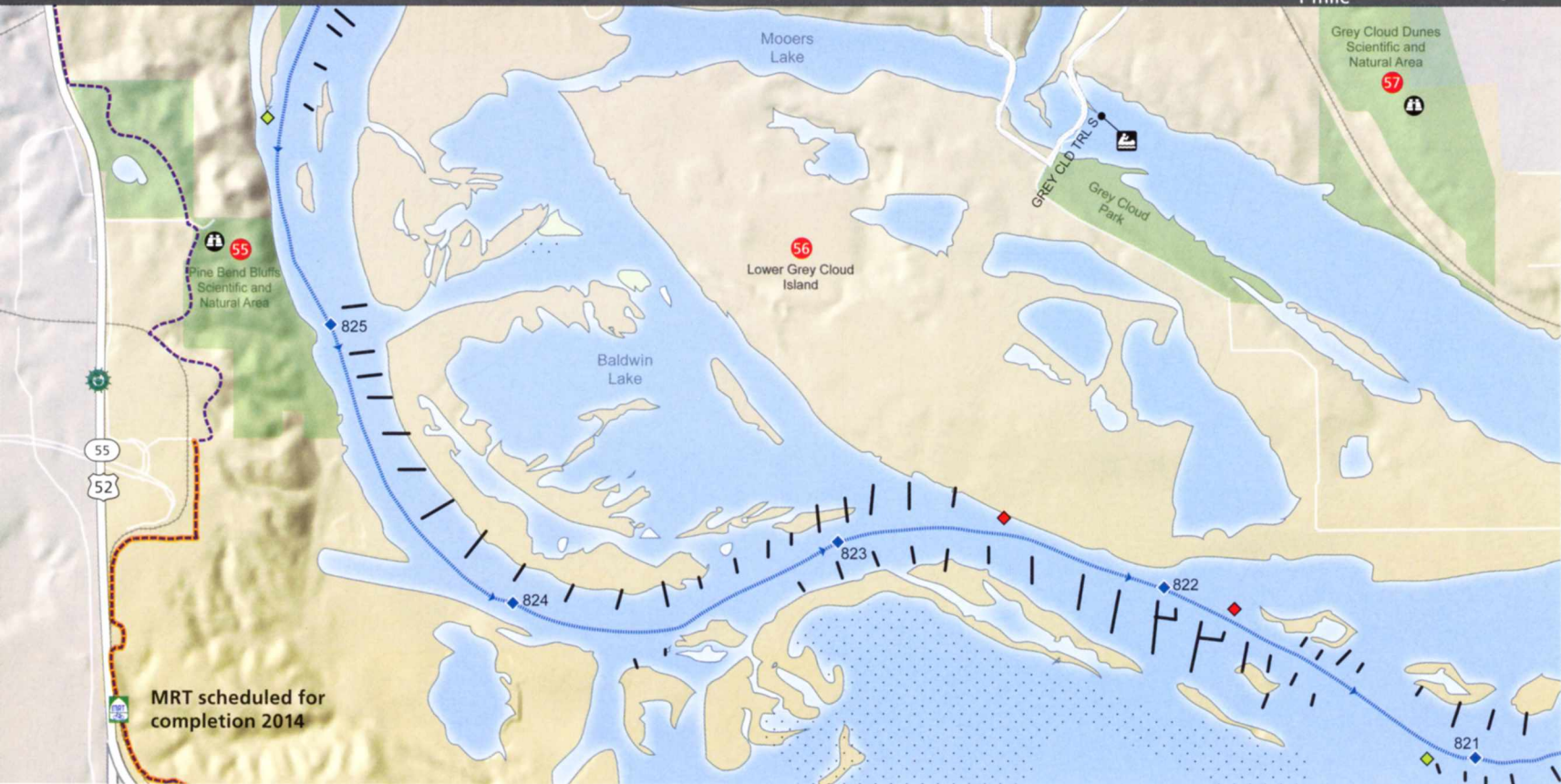


Grey Cloud Dunes
Scientific and
Natural Area

57



1 mile





River mile	Latitude	Longitude
825	N 44.783585	W 93.021339
824	N 44.772358	W 93.010858
823	N 44.774893	W 92.992392
822	N 44.772982	W 92.973654



1 mile

1 mile

River mile	Latitude	Longitude
820	N 44.772939	W 92.939452
819	N 44.782317	W 92.926990
818	N 44.774103	W 92.911267
817	N 44.774222	W 92.891985



Grey Cloud Dunes
Scientific and
Natural Area

57



IDEAL AVE S

110TH ST S

**Cottage
Grove**

MILLER RD

INNOVATION RD

Cottage Grove
Ravine Regional
Park

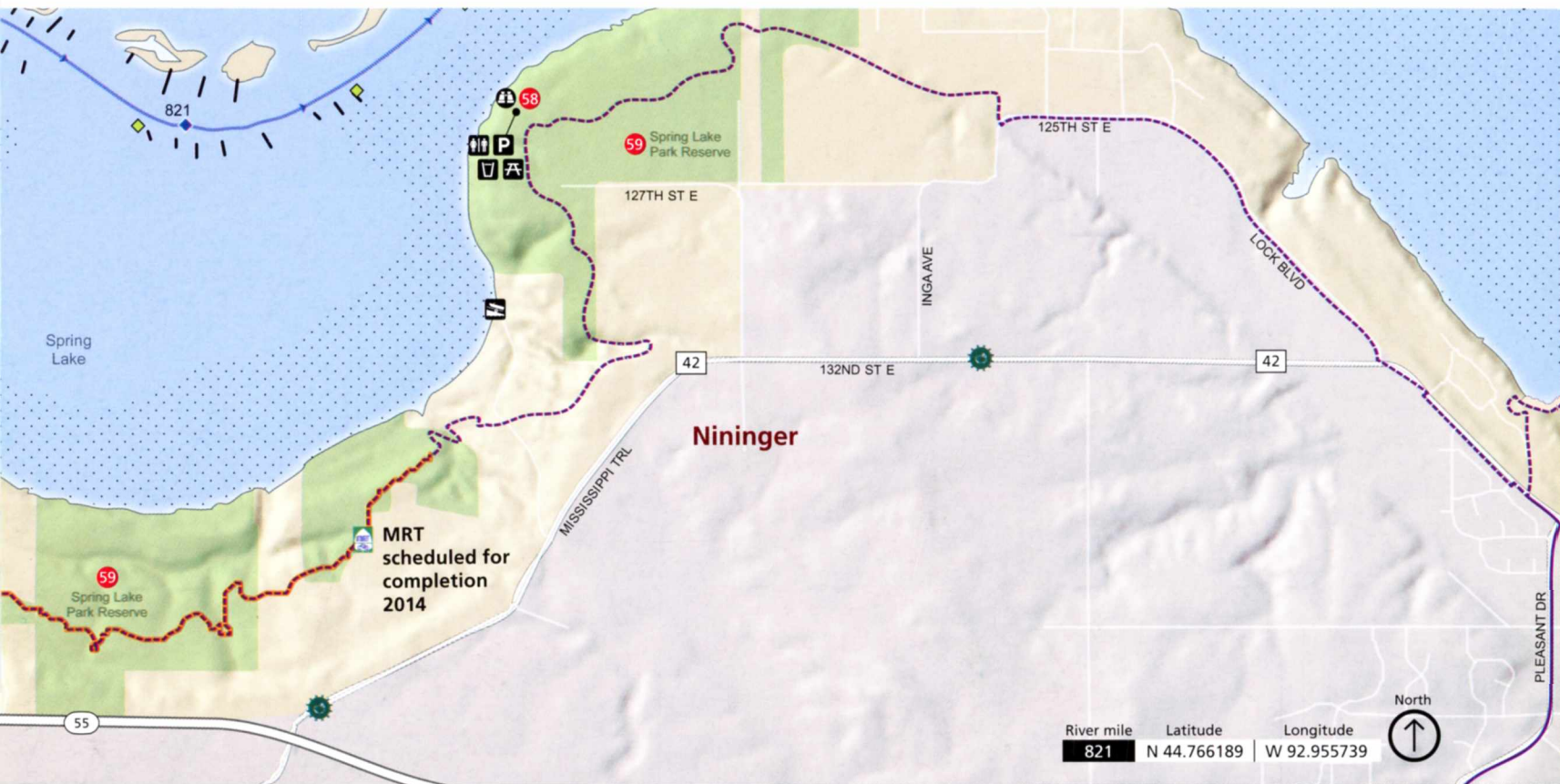
KIMBRO AVE S

E POINT DOUGLAS RD

61

10





55

42

132ND ST E

42

Nininger

MRT
scheduled for
completion
2014

River mile

821

Latitude

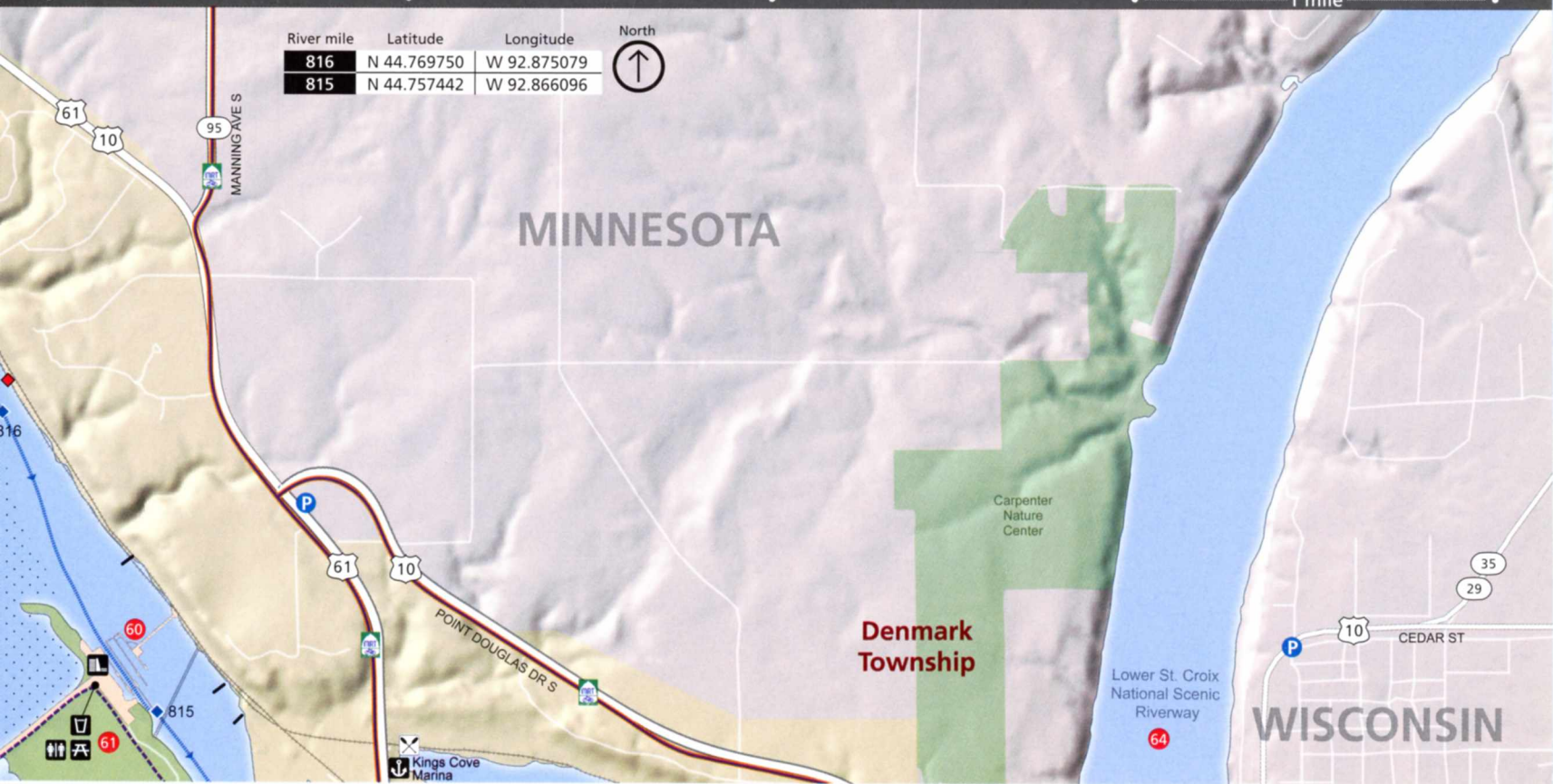
N 44.766189

Longitude

W 92.955739



1 mile





1 mile

1 mile

Prescott



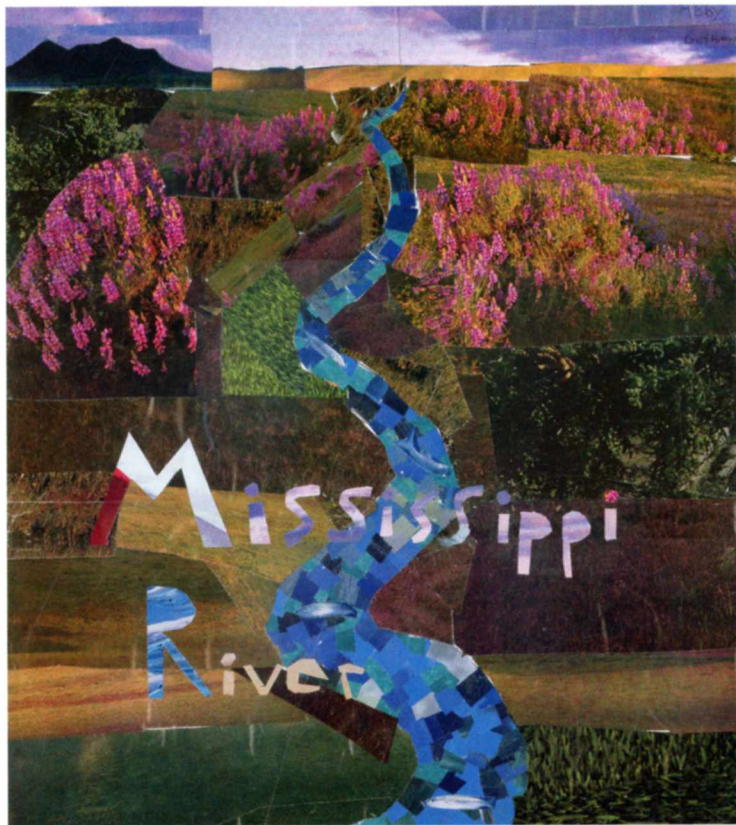


River mile	Latitude	Longitude
807	N 44.712732	W 92.730388
806	N 44.702810	W 92.716279



1 mile





2004 Big River Art Contest winner, Abby Guthmann. (NPS)

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Coldwater Spring

Once a vital source of water for the soldiers of Fort Snelling and later home to the Bureau of Mines Twin Cities Research Center, Coldwater Spring is in the process of being restored to a natural open space.

Coldwater sits above the Mississippi River just upstream from its confluence with the Minnesota River between Minneapolis and Saint Paul (**Map C40**). In 1820, soldiers camped at Coldwater Spring and began building Fort Snelling. By 1824 the fort had been completed. Soon after, a community of squatters settled around Camp Coldwater, including blacksmiths, settlers, and fur traders. By 1837, some 150 people were living at Camp Coldwater, Minnesota's first American settlement.

Coldwater Spring, a natural groundwater spring, provided water to Fort Snelling for about one hundred years. By 1920, the fort opted for other water sources, and Coldwater Spring languished. In 1949, the Bureau of Mines began building their Twin Cities Research Center at Coldwater. The research center became the site of key innovations.

Engineers and scientists developed technology to mine on the moon, conducted research leading to the growth of the taconite industry, and developed safety technologies, one of which dramatically reduced black lung disease in coal mines. The Bureau of Mines Coldwater chapter ended abruptly in 1996, when the federal



Coldwater Spring, circa 1900. (NPS)



Coldwater Spring after the restoration. (NPS)



Coldwater Spring volunteer tree planting. (NPS)

government shuttered the bureau, abandoning a dozen buildings at Coldwater Spring.

In January 2010, the Department of Interior transferred management of Coldwater to the National Park Service, and in November 2011, the park awarded a contract for demolishing the decaying Bureau of Mines buildings and restoring the property. Along with the Mississippi River Fund, volunteers and staff have worked to restore habitat, pulling buckthorn and other invasives and seeding and planting native species.

Coldwater Spring opened to the public on September 1, 2012 and will require years of effort to restore savanna, prairie, wetlands and woodlands. Already, eagles, herons, deer and fox are common sights. Coldwater Spring is the largest single piece of property owned by the park within the park's 72-mile corridor. Being part of this urban national park is the newest chapter in Coldwater's rich history.

For more information, visit www.nps.gov/miss/parkmgmt/bomcurr.htm

Ford Water Power

Young Henry Ford was intrigued by the power of flowing water. He would accompany his father when he took their grain to grist mills, where it was ground into flour. When Henry was in school, he and his friends built a small dam in the drainage ditch near the school yard. Unfortunately they forgot to “un-dam” the water, and it caused a minor flood.

Many years later, after Ford established his automobile empire, he installed a hydroelectric powerhouse at his home on the Rouge River in Dearborn, Michigan.

Thomas Edison, who Ford befriended, encouraged him to pursue his interests in water power. Starting in 1920, Ford began creating factories that utilized water power for heating and energy. The largest of these projects was at Lock and Dam 1 on the Mississippi River in the Twin Cities.

Ford Motor Company started building the auto plant and hydroelectric plant in 1923 and completed the project in 1925. The new hydroelectric plant featured four huge turbines capable of producing 4,500 horsepower and provided 80 million kilowatt hours annually.

Surprising Saint Paulites on April 25, 1925, Ford visited the site of the new plant. Walking to the bluff overlooking the river, he remarked

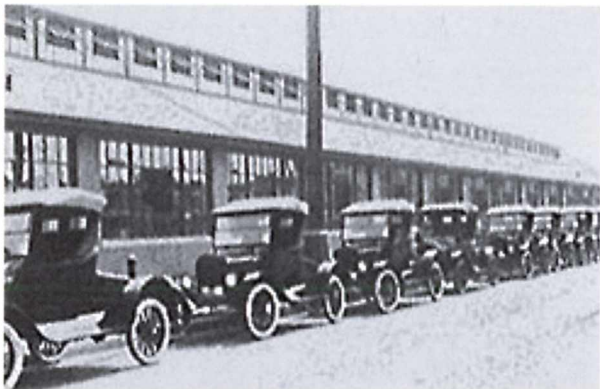


Henry Ford in Saint Paul. (Ford Motor Company)

"This scene calls for a plant that will harmonize. I intend to put up a beautiful building that will in no way detract from its beauty."

The Ford plant could assemble 500 automobiles a day. The power facility produced electricity to steam-heat and power the large manufacturing plant.

The hydroelectricity saved fossil fuel. Normally a facility this size would have required burning over 100,000 tons of coal a year to just heat it.



Ford cars ready to leave the plant, circa 1924.
(Library of Congress, LC-D420-2877)



Saint Paul Ford Plant. (Ford Motor Company)

In 1926 Ford added a glass manufacturing facility that used the rich, pure silica sand found in the bluffs at the Ford plant site. The Ford Twin Cities plant was second in size only to its Rouge Plant, in Michigan. When the facility was completed, it was called the most beautiful self-sufficient factory in the world. A contributing factor was the location and utilization of the river's water power, one of Henry Ford's fascinations.

The 86-year old facility closed in December 2011. The 122-acre river bluff property (**Map C39**) is being demolished, stabilized, and cleaned up for new development. The building where model T cars and pickups were built was torn down.

American Indians

American Indian history in the park spans almost 12,000 years. Many sites throughout the park tell us about their presence here. Few sites dating to the earliest Indian use of the corridor have been found. One of them lay near the Washington Avenue Bridge in Minneapolis. Here, a long Clovis spear point, that a hunter might have used to kill mammoths or ancient bison, was found.

People of the Woodland Era (2,500 to 350 years ago) left a more substantial archeological record. On Dayton's Bluff ([Map D46](#)), overlooking the Mississippi River Valley, 37 burial mounds once ran along the bluff edge. Only six remain. They date from about 100 to 300 A.D.

The mounds were built by people of the Hopewell Culture, which flourished throughout the Ohio River valley and central Mississippi River valley between 200 B.C. and 400 A.D. People of the Hopewell Culture traded widely, acquiring fossilized shark's teeth from Chesapeake Bay, seashells from the Gulf of Mexico, copper from the Great Lakes, mica



A view of Indian Mounds Park in Saint Paul, circa 1898. (Minnesota Historical Society)

from North Carolina and obsidian from the area that is now Yellowstone National Park.

At the time of first European contact, the Dakota Indians lived in villages around Mille Lacs Lake, in north-central Minnesota but frequently traveled up and down the Mississippi River through this area.



Indian women and children guarding corn, 1862. (Minnesota Historical Society)

In the 1750s, the Dakota left the Mille Lacs area, spreading west and south. One band, the Mdewakanton, moved south into the lower Minnesota River Valley and along the Mississippi River from the Twin Cities down to Winona. They established villages and traded with the French, British, and Spanish. Following the Revolutionary War and the Louisiana Purchase of 1803, the United States claimed the lands both east and west of the Mississippi.

Early pressure from settlers rushing to the Mississippi's east bank forced the Dakota to sign a treaty in 1837 by which they gave up their lands east of the river. But the pace of settlement only intensified, and in 1851 the Mdewakanton Dakota signed the Treaty of Mendota. This time they ceded their lands west of the Mississippi in exchange for a reservation on the Minnesota River.

The Dakota had names and stories for sites all along the Mississippi. Explorers and settlers quickly replaced these with new names and stories. Today, the National Park Service is working with the Dakota to restore their names and stories to the river. The Dakota called the Mississippi River **Ha-Ha-Wakpa** (river of the falls). Dayton's Bluff was **I-Mni-Za Ska** (white rocks, because of the white sandstone cliffs).

River of Life

The Mississippi River is a great river of life running through the heart of North America. Some of that life stops in the metropolitan area for a season, some stays all year, and some passes through on its way to and from somewhere else.

Millions of migrating birds, including forty percent of the migrating waterfowl in North America, use the Mississippi Flyway. Many small birds fly by night and rest by day. In spring you can spot them in parks along the river, such as North Mississippi Regional Park (**Map B29**), Minnehaha Regional Park (**Map C39**), Crosby Farm Regional Park (**Map C40**), and Grey Cloud Island (**Maps E61 and E62**).

Perhaps the most charismatic bird in the area is the bald eagle. Thirty years ago, bald eagles were a rarity here. Today, there are more than three dozen nests in the national park corridor's 72 miles, and there are more every year. Bald eagles are still federally protected, although they were removed from the endangered species list in 2007.

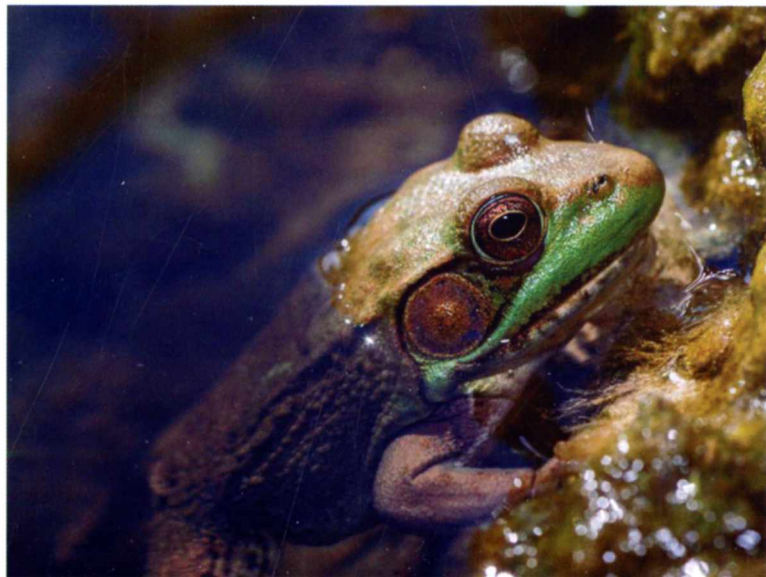
Bald eagles eat a lot of fish, so in winter, look for them where the river is ice-free. They often roost in the Bruce Vento Nature Sanctuary (**Map D46**) on sunny mornings. In spring and summer, look near the mouth of the Crow River (**Map A16**) and between



Native mussels. (NPS)

Coon Rapids Dam (**Map A20**) and the I-694 Bridge (**Map B28**). Also look near the mouth of the Minnesota River (**Map C40**), in the Pigs Eye Lake area (**Maps D48 and D49**), around Lower Grey Cloud Island (**Map E62**) and at Prescott, Wisconsin (**Map E67**).

Possibly the least charismatic animal in the corridor is the Higgins eye pearly mussel, which lives partly within the gravel river bottom. A federally endangered species nearly driven to extinction by habitat disruption and invading zebra mussels, it was successfully reintroduced in the Hidden Falls-Fort Snelling area (**Map C40**). The winged maple leaf



Northern green frog at Coldwater Spring. (Gordon Dietzman, 2012)

mussel, an endangered species even more rare than the Higgins eye, was reintroduced in the same area in 2008.

The river supports more than 127 fish species, although some are rare. Migratory fish, such as the skipjack herring and American eel, find it hard to migrate this far upstream since construction of the lock and dam at Keokuk, Iowa, in 1913, but they do reappear in flood years when the dams all open their gates.

Back in the 1920s and 1930s, water quality between Saint Paul and Hastings was so poor that there were no fish. They returned only after sewage treatment was begun in 1938. The river downstream of Saint Paul is now managed as a trophy walleye fishery. Always follow catch and release guidelines and check the Minnesota and Wisconsin departments of natural resources fish consumption advisories before eating river fish.

Whitetail deer, raccoon, Canada geese, wild turkeys, and coyotes have adapted well to the urban environment along the river. Opossums can't handle harsh winters, and the fact that they're far more common here today than 30 years ago tells us something about our changing climate.

Urban Bird Watching

The urban Mississippi River in the Twin Cities metro area delights bird watchers year round. You can see a bald eagle almost any time of year during your commute, flush a flock of wild turkeys during a stroll on the river's banks, or hear thousands of tundra swans passing overhead on a moonlit night in November.

Year-round bird-watching opportunities include:

January and February – Look for patches of open water, like the Pigs Eye outflow (**Map D49**), for bald eagles. Where the Mississippi River meets the St. Croix River (at Point Douglas Park - **Map E67**) look for trumpeter swans, common goldeneyes, common mergansers and rarities like long-tailed ducks and harlequin ducks.

March and April – Spring brings early migrants and nesting birds - American robins can be seen feeding on berries and bald eagles are settling into their nests at Pigs Eye Lake (**Maps D48 and D49**) and Lilydale Regional Park (**Map D47**).

Keep a sharp eye open around Spring Lake Park (**Map E65**) to catch the first eastern bluebirds and tree swallows setting up territories in nest boxes in open areas of the park. As ice comes off the river, look for ospreys to return to their nesting platforms.



Ranger Dan Dressler birdwatching along the Vermillion River. (NPS)

May and June – These are the months birders live for. Songbirds like warblers, vireos, orioles, tanagers and hummingbirds return. Warbler watching is excellent anywhere along the river in May, especially at Fort Snelling State Park (**Maps C40 and C41**) and Coldwater Spring (**Map C40**). A trip through Lilydale (**Map D47**) or Crosby Farm Regional Park (**Map C40**) may yield views of two of the park's most beautiful nesting species - the gold and sky blue prothonotary warbler and the deep blue indigo bunting.



White pelican. (NPS)



Red tailed hawk. (NPS)

The Bruce Vento Nature Sanctuary (**Map D46**) is another area filled with these species. The sanctuary has been known to host nesting orchard orioles and American kestrels. Peregrine falcons are fun to watch from the overlook at Lock and Dam One (**Map C39**) as the young test out their wings.

August – The all too soon fall migration begins and continues through September and October. Large flocks of common nighthawks can be seen at dusk in late August, sometimes right from the Stone Arch Bridge (**Map B31**). Most noticeable are the huge flocks of American white pelicans soaring overhead. It is said that forty percent of North America's waterfowl follow the river to the Gulf of Mexico. Look for flocks of gadwall, lesser scaup, canvasbacks, blue-winged teal, ruddy ducks and Canada geese as a few of the species visible during this rush hour of migration.

November and December – Several large migrants are still passing through. Bald eagles and golden eagles are possible as they find food to use during the winter months. Tundra swans fly at night by the thousands and tens of thousands of common mergansers pass through in December. As long as there is open water, great bird sightings are possible. You could even spot a long-eared owl roosting in a cedar tree along a path if you're lucky.

Water Quality

What was the Mississippi River's water like 200 years ago? Was it clear like a swimming pool? Was it clouded with sediment? How did it smell or taste?

During his 1805 expedition, Lt. Zebulon Pike found that "the water of the Mississippi, since we passed Lake Pepin, has been remarkably red; and where it is deep, appears as black as ink. The waters of the St. Croix and St. Peters (Minnesota) appear blue and clear, for a considerable distance below their confluence."

Twelve years later, Major Stephen Long remarked, "The water is entirely colorless and free from everything that would render it impure, either to the sight or taste. It has a greenish appearance ... but when taken into a vessel is perfectly clear."

On July 29, 1820, explorer Henry Rowe Schoolcraft camped five miles below the Crow River's mouth. He described the water as "chocolate brown" but said it was clear when scooped out of the river. He could see pebbles four to five feet down.

Settlers quickly began polluting the Mississippi, however. By the 1880s, lumber millers dumped so much sawdust and mill refuse into the Mississippi that it blocked navigation. In 1881 the Army



The Beauty of a Clean River

2009 Big River Art Contest winner, Aminata Kromah. (NPS)

Corps of Engineers (Corps) reported that from Minneapolis to Winona, many of the sandbars were in fact sawdust bars.

As the population grew, cities became the river's largest polluters. In its 1884 report, the Corps complained that Saint Paul was filling its harbor with garbage it dumped on the ice every winter.

By 1930 Judson Wicks, president of the Minnesota Izaak Walton League, estimated that the Twin Cities put 144 million gallons

of sewage into the river each day. When the river levels were low, there was one gallon of sewage for every 5.8 gallons of water. The pollution affected human health. Before 1911, Minneapolis experienced regular typhoid fever epidemics.

Between 1891 and 1910, an average of 950 people suffered and 95 people died from it each year. This number decreased when cities started using chlorine to disinfect their drinking water. Still, in 1935 another typhoid epidemic struck Minneapolis, infecting about 190 people and causing six deaths. The source was traced to the Fridley water treatment plant, where the operators had slightly lowered the amount of chlorine they added to the water.



Trash in the river. (NPS)

Pollution also affected wildlife. As recently as 40 years ago, when human and industrial pollution were still discharged into the river, the river was nearly devoid of fish, insects, mussels, and other life that signals a healthy environment. Since then, passage of the Federal Clean Water Act has helped to correct some of the worst pollution, and great improvements have been made.

Another important factor in the river's improvements to date has been treatment of our sanitary waste.

The Metro Wastewater Treatment Plant, the first to be built on the Mississippi River, was built in 1938. Stormwater and sanitary sewers in the Twin Cities were separated in the 1980s and 90s, which kept more human waste out of the river. On the whole, we pay a lot more attention to the river's water quality than we once did, but we still face problems from the impacts of increased flow, mercury, fertilizers, industrial chemicals, and a host of other contaminants that find their way to the water and up the food chain, and in many cases further downstream where they create additional problems.

For more information on how water quality impacts the river and our use of it, check out the *State of the River Report* at www.stateoftheriver.com.

St. Anthony Falls

American Indians had many names for the Mississippi River's only major waterfall. The Dakota called it **Owamniyomni** (eddy or whirlpool) and **HaHa Tanka** (big waterfall). The Ojibwe used **Kichi-Kakabika** (the great severed rock) for the fractured limestone blocks that littered the area below the falls.

The falls possessed energy, spirituality and history for the Dakota. In 1680, as his party portaged around the falls (**Map B31**), Father Louis Hennepin saw a Dakota man praying to Oanktehi, the spirit of waters, who resided below the falls. Hennepin wrote that the man "had a beaver robe dressed neatly, whitened inside, and decorated with porcupine quills, and was offering it in sacrifice to this cataract, which is terrifying and admirable."

Settlers saw a different kind of power. After the Treaty of 1837 with the Dakota opened the Mississippi's east bank to settlement, Franklin Steele staked his claim on the east side and by 1848 had completed a dam and a sawmill.



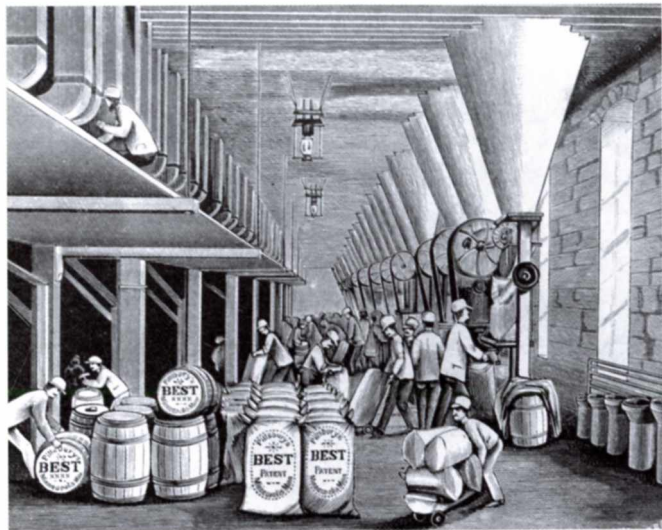
St. Anthony Falls, Minneapolis. (NPS)

The west side of the river was opened to settlement in 1855, and more millers established sawmills there. Lumber milling grew from about 12 million board feet in 1856 to about 90 million in 1869. Lumber was the city's largest employer.

Flour milling grew even faster. In 1859 the Cataract Mill became the first commercial flour mill on the west side. Twelve years later, seven new mills

joined it, including C. C. Washburn's six-story limestone mill. Four more flour mills operated on the east side.

In the 10 years between 1870 and 1880, Minnesota's flour production grew from 193,000 to more than 2,000,000 barrels annually, and Minneapolis claimed title as the nation's leading flour milling center, which it held for 50 years.



Pillsbury Flour Mill. (Minnesota Historical Society)

Strengthening the city's claim, Charles A. Pillsbury erected the Pillsbury A Mill on the east side of the river in 1881 and built a 450-foot-long canal under Main Street to feed water to it. The seven-story, limestone mill was the world's largest flour mill for a short time. The Pillsbury A Mill and the Washburn A Mill (**Map B31**) are both National Historic Landmarks.

James J. Hill, who had invested in the mills, completed the Great Northern Railroad's Stone Arch Bridge (**Map B31**) in 1883 to deliver even more wheat to the milling district. His bridge, now a National Historic Engineering Landmark, is a popular urban trail.

Flour production at the falls continued to surge on steam power and then hydroelectric power. Milling production grew from 13,694,895 barrels in 1908 to 18,541,650 in 1916. In 1930 Minneapolis lost its title to Buffalo, New York, and by 1960 it began removing many of the mills that had made it famous.

You can learn more about the legacy of milling at St. Anthony Falls at Mill Ruins Park (**Map B31**) and at the Mill City Museum (**Map B31**), housed inside the Washburn A Mill ruins.

The St. Anthony Falls Heritage Trail is a self-guided 1.8-mile walking tour of the St. Anthony Falls Historic District. It circles the falls via Nicollet Island, the Hennepin Avenue Bridge, and the Stone Arch Bridge. Kiosks, way markers, and signs mark the trail and tell the stories of the people and companies that created the district.

Meeker Island Lock & Dam Ruins

On July 16, 1817, Major Stephen Long and his men strained at the six oars of their skiff, but the rapids of the gorge pushed them back. They tried poling and raising a sail to catch the strong breeze behind them but could not make it through. Finally they pulled their boat upriver by wrapping ropes around a series of trees, a process called cordeling.

The 8.5-mile gorge runs from just below St. Anthony Falls ([Map B31](#)) to the mouth of the Minnesota River ([Map C40](#)). Before dams were built, few boats dared to navigate the gorge. Rapids boiled through the gorge at high water and boulders barred steamboat traffic at low water, so Saint Paul became the head of navigation. Minneapolis hoped to change that by building the Meeker Island Lock and Dam ([Map C38](#)), the first dam on the river, to subdue the rapids.

In 1907, the **Itura** became the first steamboat to pass through the dam's lock.

The Army Corps of Engineers originally named this Lock and Dam 2. The Corps began construction in 1899 and completed it in 1907. It was the first of two low dams the Corps planned for the gorge. Lock and Dam 1, 2.5 miles downstream, was completed



Paddling past the Meeker lock wall and bollards in high water. (NPS)

in 1917. Both were low-head dams, incapable of producing hydropower.

Between those years, hydroelectric power came of age in America. Twin Cities residents realized that one high dam could be a great source of cheap electricity, so they convinced Congress to change the project. The Corps raised Dam 1 from 13.3 feet to 35.0 feet and abandoned the Meeker Island Lock and Dam.



Meeker Island Lock & Dam, 1908. (Minnesota Historical Society)

After Lock and Dam 1 was finished, in 1917, the Ford Motor Company built a hydroelectric station on it in 1924. Meeker Island Lock and Dam was unnecessary, so the Corps blasted off the top five feet, removed the lock gates, and walked away in 1912.

The remains of the Meeker Island Lock and Dam lie just above the Lake Street Bridge ([Map C38](#)). When water levels are up, you can see a line of mushroom-like bollards poking out of the water. When the river is down, you can see the lock walls on which the bollards are anchored. Bollards are the posts steamboats and barges tied up to while locking through.

One lock wall sits out in the river and the other is along the river's east bank. The remains of a structure that once operated the lock still rest on the upriver end of the site. Nearby, an 1899 iron stairway climbs to the blufftop. At the downstream end, a new trail follows an old wagon road up the bluff to the foundation of the lockmaster's house.

The Meeker Island Lock and Dam is listed on the National Register of Historic Places as a nationally significant site.

Three Mississippi

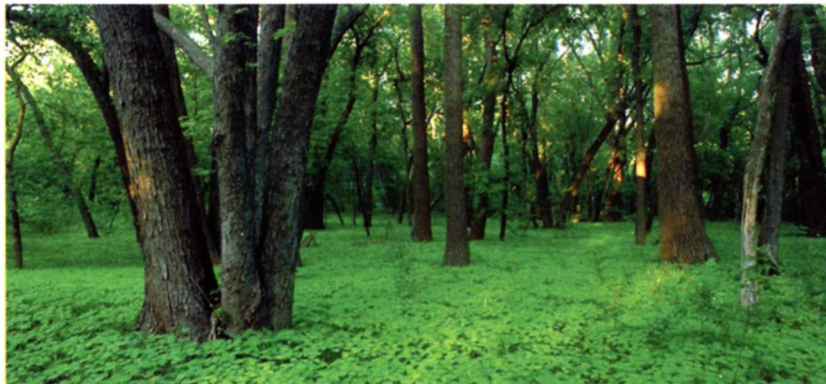
The Mississippi River changes more dramatically as it flows through the Twin Cities than anywhere else. This 72-mile stretch is actually three different rivers: the prairie river, the gorge, and the large floodplain river. The transition between them is abrupt and unmistakable.

At its confluence with the Crow River (**Map A16**), where the national park begins, the Mississippi is a prairie river. It remains so for 25.5 river miles, down to St. Anthony Falls in the heart of Minneapolis (**Map B31**). River banks vary in height from only a few feet to about 30 feet, and the valley is less than two-tenths of a mile to about a mile wide. This stretch of river has little floodplain, few braided channels, only small islands and no backwater lakes.

Two dams back water up into the prairie reach. One is at Coon Rapids (**Map A20**). Its reservoir extends about 5.5 miles upstream, above which the Mississippi River again can fall to its natural low-water depth. The second is at St. Anthony Falls (**Map B31**), 12 river miles below Coon Rapids. This dam creates a pool roughly 6.5 miles long. For the 5.5 miles above that, the river can fall to its natural low-water stage. In these two



The prairie river. (NPS)



The floodplain forest. (NPS)

stretches that are unaffected by the dams, you can paddle on a river much like it was hundreds of years ago.

The second Mississippi River is the 8.5-mile long gorge from St. Anthony Falls to the mouth of the Minnesota River (**Map C40**). Nowhere else does the Mississippi drop so steeply (110 feet) through such a tight, narrow canyon. Vertical bluffs rise from 50 to 100-plus



Mississippi River gorge. (NPS)

feet above the river, and bluff tops are generally a tenth to two-tenths of a mile apart.

Before Locks and Dams 1 and 2 flooded the gorge, a spectacular rapids boiled through this reach at high water. At low water, you could have waded or hopped across the river on limestone boulders and stopped to rest on one of more than a dozen islands. Today the boulders are gone or submerged and only one island remains (**Map C39**).

The large floodplain river begins at the mouth of the Minnesota River and runs to the Gulf of Mexico. This is the river of Mark Twain and steamboats, the river of myth and metaphor. It is characterized by a broad valley and a wide floodplain, with many side channels, backwater lakes, wetlands and wooded islands. Towering bluffs, some more than 250 feet high, frame the valley.

Where the gorge ends, the Mississippi Valley is about two-tenths of a mile wide. At its confluence with the Minnesota River it widens to a half mile.

Beyond downtown Saint Paul, the valley expands to nearly two miles. A little farther downstream, it widens to three miles in places and the floodplain river is enclosed by tall bluffs.

Mississippi-Minnesota River Confluence

"One of the great natural facts is that the mouth of the Minnesota River lies immediately over the center of the earth and under the center of the heavens" (**The Dakota Friend**, a newspaper printed by missionaries Samuel and Gideon Pond, 1851).

The confluence of the Mississippi and Minnesota rivers concentrates history. To the Mdewakanton Dakota, the confluence, **Bdote Minisota**, has deep historic and spiritual meaning. To early Americans it became a center of trade and military authority.

The Dakota called the hill above the Minnesota River overlooking the confluence **Oheyawahi** (the hill much visited), and they placed their dead on scaffolds there. The place is now called Pilot Knob (**Map C40**). It was here, too, that the Mdewakanton and Wapekute bands of the Dakota signed the Treaty of Mendota in 1851, giving up their lands west of the Mississippi in exchange for a reservation. They returned 11 years later, following the Dakota Conflict of 1862, confined to a prison camp below Fort Snelling. What must they have thought, to be at the center of the earth, looking up at **Oheyawahi**?

On September 21, 1805, Lt. Zebulon Pike landed his boats on the big island at the confluence, now called Pike Island (**Map C40**). He



Lieutenant Zebulon Pike. (Minnesota Historical Society)

had come up the Mississippi on orders to discover the Mississippi's source, make alliances with the Ojibwe and Dakota, assess the fur trade, evaluate the resources the United States had acquired west of the Mississippi with the Louisiana Purchase of 1803, and secure the best sites for military posts.

About noon on September 23, Pike says he "had a bower for shade, made of my sails, on the beach, into which only my gentlemen (the traders) and the chiefs entered." He gave a speech telling the Dakota that America now owned both sides of the Mississippi. His main objective was to forge a treaty granting the



Historic Fort Snelling. (Unknown)

United States land at the confluence, St. Anthony Falls and the St. Croix River's mouth. After the Dakota signed, Pike boasted that he had acquired the land "for a song."

The Dakota and British traders still controlled the area in 1819, when Colonel Henry Leavenworth arrived to build a fort. A year later he was replaced by Colonel Josiah Snelling, who set the cornerstone on September 10.

Finished in 1825, Fort Snelling (**Map C40**) became the regional center for intertribal gatherings and negotiations with the Dakota, Ojibwe, Menominee, and Ho-Chunk. Fur traders moved in across the river at Mendota, nearby at Camp Coldwater, and just up the Minnesota River.

Realizing that the frontier had moved west, the Army sold the fort in 1857, but reclaimed it in 1861, when the Civil War started. Fort Snelling served important roles during the Mexican War, the Spanish-American War, World War I, and World War II. Today the walls of the frontier fort and the two cavalry barracks (built in 1904) loom above the river on the Mississippi's west bluff.

Floods & Droughts

Water levels in the Mississippi rise and fall throughout the year, in ancient cycles of flood and drought.

Spring snow melt usually brings high water — sometimes floods, sometimes just a few weeks of higher flows. Early summer rains often bring what river people call the “June rise.” Dry summer weather often brings low water levels in August and September. Fall rains often raise the river to more normal levels, but freeze-up slows the river to the winter base, made up primarily of groundwater flows.

No two years are exactly alike, but plants and animals have long adapted to this seasonal rhythm of constantly changing river levels.

Construction of the lock-and-dam system in the 1930s had no effect on floods — the dams just open the gates and let the river run through during floods — but the dams do maintain higher minimum water levels for shipping during low flows. Since river vegetation is adapted to floods and droughts, it has suffered in the perpetually high water. The lower sections of the river pools especially just above Hastings (**Maps D66 and D67**) — now have fewer plants and fish.



Leonard and Ann Todora on upper levee during 1952 flood
(Minnesota Historical Society)

Meanwhile, humans have dealt with droughts and floods in their usual way: moving onto the floodplain during prolonged droughts, then fighting the river when the floods return.

Bohemian Flats (**Map B31**), on the West Bank beneath the Washington Avenue Bridge just across from the Minneapolis main campus of the University of Minnesota, is one flood-



Downtown Saint Paul flood, 2011. (NPS)

prone area that was home to several waves of immigrant families too poor to find housing in higher parts of the city. In the 1930s and 40s, the area was converted from housing to coal piles, and today it's all a park.

Lilydale Regional Park (**Map D47**), downstream of the I-35E Bridge, was once the thriving community of Lilydale, but floods took their toll here in 1951, 1952, 1965, and 1969. Many residents abandoned the area after the record flood of 1965. In 1971 funds were appropriated to turn Lilydale into a park, and the last homes were bought out and bulldozed.

The West Side Flats (**Map D46**), across from downtown Saint Paul, faced a similar conversion from residential uses following the two big floods in the early 1950s, but here the conversion was to industrial use rather than parkland. Today, the neighborhood is protected by a levee and is undergoing transformation back to a commercial and residential neighborhood.

Levees do protect flood-prone areas from the ravages of a turbulent river, but they also cause higher water across the river and upstream. A recent levee construction project to protect the Holman Field airport near downtown Saint Paul included careful deepening of the river itself adjacent to the airport to enable the river to pass a large flood without raising water levels in the downtown area.

Barges & Tows

From spring to fall, you can watch barges being loaded, unloaded, cleaned and lashed together in groups on the riverfront downstream of Saint Paul ([Maps D46 and D47](#)).

Most cargo barges on this stretch of the river are rectangular steel boxes 195 feet long and 35 feet wide that can “draft” nine vertical feet into the river. Towboats equipped with one or two 5,000-horsepower engines can push as many as 15 barges at one time in groups called “tows.” Between Saint Paul and Minneapolis, where the locks are smaller, towboats usually push just two barges.

Barges carry commodities that aren’t in a big hurry. One barge can hold 1,500 tons of dry material, which is roughly 52,000 bushels of corn or 450,000 gallons of crude oil. This is the same as 15 railroad cars or 58 large semi-trucks. A full 15-barge tow is a quarter-mile long and carries the equivalent of a three-mile-long train, or almost 12 miles of semi-trucks running bumper to bumper.

Most of the barges headed downriver from Saint Paul and the Minnesota River carry grain. In fact, seven percent of the nation’s grain is shipped on the Mississippi River by barge to



A tow filled with sand in Lock 1. (NPS)

New Orleans, where it gets loaded onto ships. Barges headed upriver carry a variety of commodities, including cement, sand, gravel, coal, fertilizer and crude oil. Most of them stop in Saint Paul. Many barges that move between Saint Paul and Minneapolis carry sand and gravel from a quarry on Grey Cloud Island (**Maps D61 and D62**).

The river's 29 locks and dams control water levels to create a "stairway" of water from Minneapolis to St. Louis that's deep enough to float those nine-foot-deep barges.

Besides keeping a lot of traffic off the roads, river shipping provides a competitive alternative to railroads, which helps

keep shipping costs down. Lower shipping costs mean a lot to farmers in the Midwest.

The river shipping industry boasts that shipping by barge is better for the environment, partially because it burns less fuel per ton-mile, and partly because barges have fewer accidents than trains or trucks. Those statements are true, although the rare barge accidents that do occur have a direct and immediate effect on the river's environment.

Thanks to the Oil Pollution Act of 1990, today all river barges that carry hazardous material (like crude oil) have double hulls, which reduces the likelihood of cargo leaking into the river.



Fully loaded barge near confluence of Minnesota and Mississippi rivers. (NPS)

Mounds Park & Wakan Tipi

Dayton's Bluff is a neighborhood just downriver from downtown Saint Paul. The actual bluff, known to the Dakota Indians as I-Mni-Za Ska, is an important historical site ([Map D48](#)).

Indians of the Hopewell culture built burial mounds on the bluff 2,000 years ago. Six large mounds remain.

On March 19, 1680, 120 Dakota warriors beached their canoes below the bluff. They had canoed downriver to attack their enemies, the Miami Indians of Illinois, and had returned with three French explorers: Michael Accault, Antoine Auguelle and Father Louis Hennepin. They continued overland to their villages near Mille Lacs Lake. With this encounter the Dakota world changed forever.

On November 14, 1766, English colonist Jonathan Carver stopped at a "great stone cave called by the Naudowessee Waukon Tebee, or ... the house of spirits." The cave lay at the base of I-Mni-Za Ska and water flowed out from a lake inside.

Here Carver discovered something already old to the Dakota. He found "many strange hieroglyphicks cut in the stone some of which," he observed, "was very a[n]cient and grown over with moss."



Carver's Cave, circa 1875. (Minnesota Historical Society)



Indian Mounds Regional Park (NPS)

Carver returned to the cave, which was then known as Wakan Tipi, on May 1, 1767, to witness an annual gathering of eight Dakota bands. The Dakota met here to place their dead on scaffolds on the bluff above or to place the bones of their ancestors in the mounds built by the Hopewell.

Between the visits of Hennepin and Carver, some Dakota bands moved out of the Mille Lacs Lake area to villages along the lower Minnesota River and the Mississippi River between the Twin Cities and Winona. Just downstream from the cave lay the village of Kaposia (**Map D49**). The Dakota occupied Kaposia until 1835 or 1837, when they moved across the river and farther downstream. Here they lived until the United States removed the Dakota from the area in 1854.

The cave, which came to be called Carver's Cave, is in Bruce Vento Nature Sanctuary (**Map D46**).

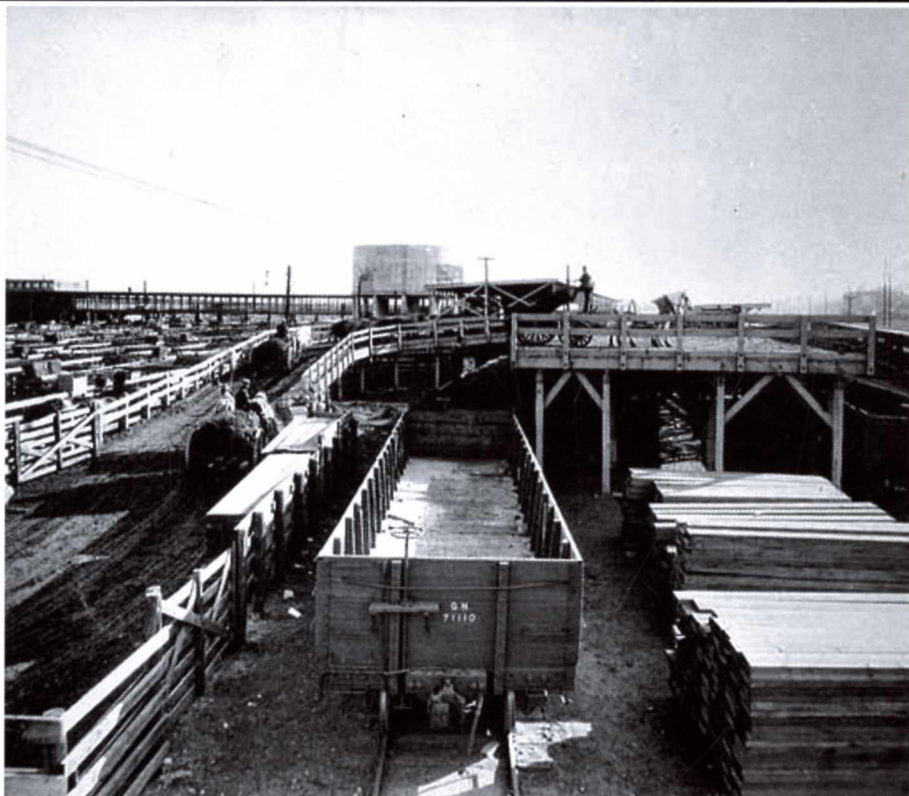
Carver's Cave and other caves in the area are closed to the public.

Wastewater Treatment

As you boat down the river in Minneapolis and Saint Paul, you see dozens of huge pipes discharging into the river. They come from neighborhoods in the metro area. At one time they carried whatever people didn't want — and what most of us would rather not think about — directly to the river. Before Pigs Eye Sewage Treatment Plant was completed in 1938, sanitary sewers from houses and businesses drained into the same pipes that carried stormwater. All the waste went directly to the river untreated. As long as it flowed away, no one seemed to care.

With construction of Lock and Dam 1 ([Map C39](#)) between Minneapolis and Saint Paul in 1917, sewage stopped floating downriver, and stinking mats of sewage sludge backed up behind the dam.

Downriver, sewage, industrial waste, and street runoff combined with animal waste from the stockyards in South Saint Paul in a foul brew that flowed downriver past Hastings to Lake Pepin. It was out-of-sight and out-of-mind for Twin City residents. For a while.



Manure loading dock, South St. Paul Stockyards, ca. 1929.
(Minnesota Historical Society)



2010 Big River Art Contest Winner Adam Bastian. (NPS)

In 1930, when Lock and Dam 2 was constructed at Hastings (**Map E67**), the Twin Cities faced their waste problem again. The Mississippi River's largest wastewater treatment plant was completed in 1938 to treat sanitary waste in the region before it reached the river. Today, the Metro Wastewater Plant at Pigs Eye (**Maps D48 and D49**) is one of the most advanced plants in the country, treating 215 million gallons of wastewater a day from 62 communities and 800 industries.

The plant was upgraded significantly in the 1970s, but during periods of heavy rain or snow melt the volumes of combined precipitation and sanitary waste overwhelmed the pipe system and flowed directly into the river, polluting it for more than a hundred miles. When the State of Wisconsin threatened legal action, Minnesota agreed to fund complete separation of the storm and sanitary sewers. This project took 10 years and was largely completed in the 1990s. It involved tearing up virtually every street in Saint Paul and Minneapolis and replacing all the sewer lines with storm drains that went to the river and sanitary sewers that went to the Metro Wastewater Treatment Plant at Pigs Eye.

Today, metro area sewage is now always treated at the Metro Wastewater Treatment Plant before reaching the river. Stormwater runoff is never treated, which means water from our streets, lawns and parking lots ultimately makes its way to the river untreated. Now, after a storm, there is water, not sewage, coming out of sewer outfall pipes, but it contains road salt, engine oil, pet waste, and more plastic bottles than you thought possible. It's a reminder that what we do in our homes, yards, and communities directly impacts the river.

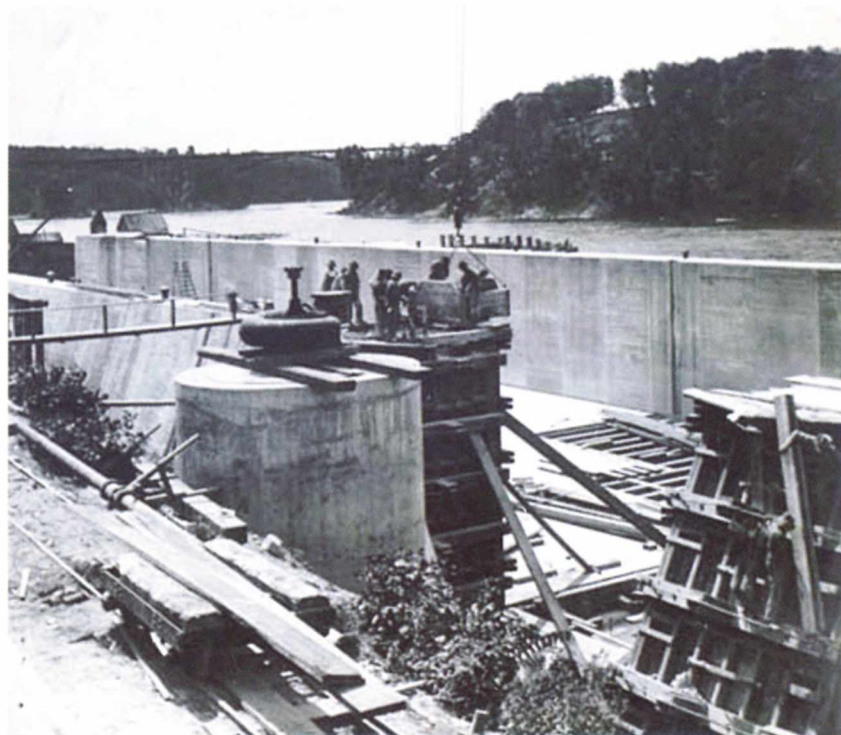
Controlling the river

Five dams keep water levels artificially high for most of the national park corridor's 72 miles. The dams don't stop floodwaters, which flow over or through the dams, but they do keep the river from dropping to its natural low levels as the water flow drops. The dams serve three purposes: shipping, hydroelectric power generation, and recreation.

Four dams have locks: Upper and Lower St. Anthony Falls (**Map B31**), in Minneapolis; Lock and Dam 1 (**Map C39**), between Minneapolis and Saint Paul, and Lock and Dam 2 (**Map E66**), just above Hastings. All of them have hydroelectric plants. The fifth, the Coon Rapids Dam (**Map A20**), was completed in 1913 to generate electricity but now serves recreation only. It has no lock.

Each dam creates a reservoir, or "pool," that keeps water levels above the sandbars and rapids that once made navigation difficult for steamboats. The lower four dams maintain a channel that's at least nine feet deep, so towboats can push barges.

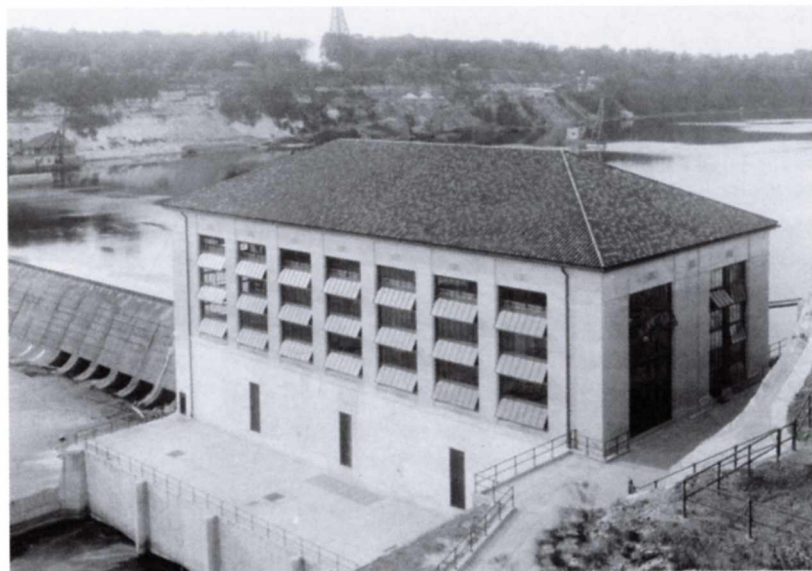
The pools hide earlier navigation improvements. From 1878 until 1930, the Army Corps of Engineers narrowed much of the Upper Mississippi River with wing dams and closing dams. Made



Meeker Island Lock & Dam construction, 1910. (Minnesota Historical Society)

of layers of rock and brush, a wing dam looked like a pier extending into the river, but it was only visible at moderate to low flows.

Like the nozzle on a garden hose, wing dams narrow the river, speeding up the current. The faster current cut away most sandbars and deposited the sand between the wing dams, causing the banks to grow inward.



Ford Hydroelectric Plant, Saint Paul circa 1935. (Ford Motor Company)

Closing dams ran from shore to an island or from one island to another. As the river fell, these dams forced all the water to the main channel, so the wing dams worked better.

In the national park corridor, the Corps built wing dams and closing dams from the Minnesota River on down. They are common downriver from downtown Saint Paul. Today, boaters must be wary of them. They lie below the water's surface and can rip off a boat's motor or puncture its bottom.

Where bottomland forest was flooded by the dams, the trees were first harvested, leaving shallow stump fields just upriver from some dams.

The locks and dams have been important for the growth of the Midwest and the nation, but they have also caused serious environmental damage. By not allowing the river to fall to its natural low-water levels, the locks and dams prevent the river's normal pulse, which is essential to many biological processes. The large, open reservoir immediately above Lock and Dam 2 has led to the erosion of the river's islands, which once provided habitat for migratory birds. Unlike backwaters and braided channels, the pool's open reservoir does not support aquatic plants, so migratory waterfowl have less to eat and less reason to stop here. Together local, state, and federal agencies are working to protect and restore the river's ecosystem.

Bridges

If you travel by river through the national park you will pass under 33 bridges and see them from a perspective that few do. Some are steel, some are concrete, and one is stone. The oldest remaining bridge, the Short Line Railroad Bridge (**Map C38**, 850.7), was built in 1880. The Stone Arch Bridge (**Map B31**) dates back to 1883.

There were no bridges at all until 1854, when the Hennepin Avenue Bridge (**Map B31**) became the first to span the Mississippi River. Before this, travelers had to cross the Mississippi on ferries or wade across.

Residents of Nininger (**Map E65**) devised one of the most creative and shortest-lived bridges when townsmen cut out a slab of ice nearly one-half acre in size, floated it down to their crossing site, and lodged it against opposing banks. The bridge allowed loggers to cut wood on a nearby island to sell to steamboats the next spring.

In 1887, a railroad swing bridge was built across the river from Inver Grove Heights to Saint Paul Park (**Map E60**). This bridge also served pedestrians and other traffic. Two bridges jumped the river at Hastings — one was a railroad bridge and the other the famous spiral bridge.

By 1895, 23 bridges crossed the Mississippi's main channel between Dayton, at the mouth of the Crow River, and Hastings. Ten were wagon bridges; 13 were railroad bridges. In Minneapolis and Saint Paul alone, 20 bridges crossed the river. Yet



Tenth Avenue Bridge Across the Mississippi, circa 1885.
(Minnesota Historical Society)

there were none in the 16 miles between the 20th Avenue Bridge in Minneapolis and the Ferry Street Bridge in Anoka. Above Anoka, the only way to cross the river was the ferry at Ramsey.

Many historic bridges are gone, such as the Hastings Spiral Bridge, the original High Bridge, the first Hennepin Avenue suspension bridge, and the Rock Island Swing Bridge.

The High Bridge (**Map D46**) — which opened in 1888 and was replaced in 1987 — was delivered by the Carnegie Keystone Bridge Company in one million pieces, with a 388-page manual.



The spiral bridge in Hastings, built in 1895, was replaced in 1955.
(Minnesota Historical Society)



Second suspension bridge across the Mississippi River,
circa 1877. (Minnesota Historical Society)

Fortunately, not all the historic bridges are gone. The original Robert Street Bridge was completed in 1885 and replaced in 1926 by the now historic, arched Robert Street Bridge (**Map D46**). That same year the Mendota Bridge (Highway 55) opened (**Map C40**). Spanning 4,119 feet across the Minnesota River, it was the longest concrete arch bridge in the world.

The collapse of the I-35W Bridge in 2007 led the state and cities on the river to examine all their bridges more carefully. At least a half dozen bridge replacements are being planned.

River Adventures

On August 25, 1852, Juliette Starr Dana, 35, stood alone on the deck of the **Dr. Franklin**. Midnight passed, but she could not sleep. The seven-mile trip down the Fever River from Galena, Illinois, to the Mississippi seemed endless, but the Great River rewarded her patience.

Before going to bed, she wrote in her journal: “the engine which ‘till then had given but feeble puffs winding slowly through the intricate navigation of Fever river, now came out in all its high pressure noise & bustle, shaking our very souls within us, & I went to bed feeling that I was indeed on the father of waters, & had turned over a new leaf in my existence.” She had set out on her journey with her son and a friend, after her wealthy husband had left on an overseas venture.

In October 1933, Clarence Jonk launched his awkward houseboat into the Mississippi River in Minneapolis. Several months earlier, he had daydreamed of the river with two friends, telling them of the sights he would see. Soon, he wrote, “... they wanted to go Gypsy-wild with me, and with me sail the long adventure of the great river.” The 27-year-old author hoped to escape the Great Depression and find inspiration for his poetry and prose.

In the summer of 1953, Charles Dee Sharp, 24, caught a ride from Minneapolis to New Orleans on a towboat pushing empty oil barges. He had just returned from fighting communists in Korea, to find Senator Joe McCarthy still conducting his witch hunt for communists in America.



Paddlers on the river. (Wilderness Inquiry)



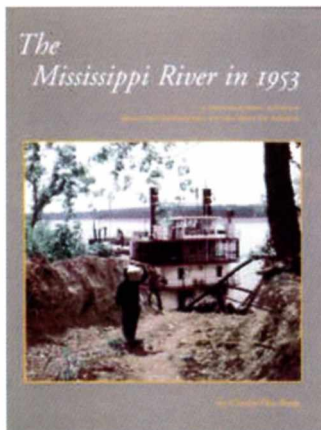
Paddleboat excursion on the Mississippi. (NPS)

Sharp felt the world was coming unglued and turned to the Mississippi to find his center. To him the Mississippi was America's "Yellow Brick Road." It was "as central to American culture as Old Glory itself."

Three people, separated in time and under very different circumstances, had one thing in common: they revered the Mississippi River. Why? What had they heard or seen or read that made the river such an icon?

Through their voyages, Dana, Jonk and Sharp communed with a river that still draws America's and the world's attention. We can list compelling facts about threats to the Mississippi River's ecological health, but it is the river's mythic power that draws the broadest and most immediate response.

Whatever type of boat you put into the water, you join Dana, Jonk, Sharp and countless other explorers, painters, writers, and excursionists who have become part of the long adventure of the Great River.



Charles Dee Sharp, The Mississippi River in 1953



Friends of the Mississippi River's Mississippi River Challenge (NPS)



Paddler in the Gorge. (NPS)

Early River Transportation

The **Virginia**, the first steamboat to navigate the Upper Mississippi River, came upstream from St. Louis in 1823. The event announced a new era. Under steam power, people and goods were transported up and downstream far more quickly and in greater quantities than on boats with sails, oars, or poles.

As the population grew, upstream cargoes included manufactured goods, such as rakes, hoes, spades, axes, grindstones, and farm machinery. Downstream steamboats carried increasing quantities of goods produced by the new farmers and merchants.

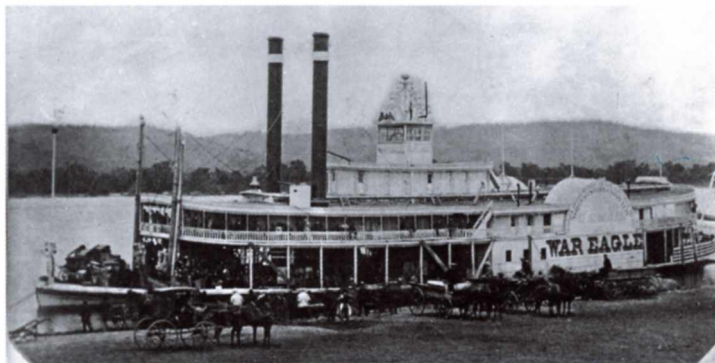
By the late 1850s, Hastings and Saint Paul were booming ports. One measure of this was the number of times steamboats docked at their wharves. Saint Paul recorded 41 steamboats docking in 1844; 95 in 1849, and more than 1,000 in 1857.

In contrast, Minneapolis tallied only about 50 steamboats in 1857, because of the rapids between the city and Fort Snelling. The steep walls of the gorge did not allow room for a port accessible to railroads.

St. Anthony Falls (**Map B31**) created an unpassable barrier, and few steamboats operated above Minneapolis.



Early steamboat approaching the Meeker Lock and Dam. (MHS)



Steamboat War Eagle, 1865. (Minnesota Historical Society)

As rapidly as the number of steamboats increased, they could not keep pace with demand. In 1854 the **Minnesota Pioneer** reported that passengers and freight overflowed from every steamboat that arrived, and that “the present tonnage on the river is by no means sufficient to handle one-half the business of the trade.”



Wanigan floating kitchen used on log drive, 1900. (Minnesota Historical Society)

Although two steamboats often left Saint Paul each day, they could not carry goods away as quickly as merchants and farmers needed.

By 1860 agricultural production overwhelmed steamboat capacity. That spring, the **Stillwater Messenger** estimated farmers between Saint Paul and La Crosse, Wisconsin, had stockpiled 200,000 bushels of grain. By the beginning of the shipping season, they'd added another 150,000 bushels.

Passengers quickly became the Upper Mississippi's most important commodity. More than one million passengers arrived at or left from St. Louis in 1855.

After the Civil War, railroads dominated river shipping. Only lumber shipping remained important on the river. Above Dayton and Ramsey (**Maps A16 and A17**) and then just above Saint Paul, log booms for holding and sorting lumber lined the river's banks. Lumber companies sent sawed lumber and whole logs to downriver mills and markets in large lumber rafts.

In 1915, the **Ottumwa Belle** pushed the last lumber raft down the Mississippi River. Commercial shipping on the river did not become important again until the Army Corps of Engineers completed most of the lock and dam system in 1940.

Monitoring Eagle Populations

The bald eagle population has made an extraordinary recovery from its low in the 1960s: only 417 pairs of bald eagles existed in the lower 48 states in 1963, but protections offered by the Clean Water Act of 1972, the DDT ban in 1972, and the Endangered Species Act of 1973 helped the eagle population rebound.

In 1995, bald eagles were upgraded from endangered to threatened and in 2007 were removed from the list entirely. In 2007, biologists estimated that nearly 9,800 pairs nested in the lower 48 states. Over 1,300 of those pairs live in Minnesota, more than any of the other lower 48 states.

Since 2006, the National Park Service Great Lakes Inventory and Monitoring Network has studied the concentration of six contaminants (lead, mercury, DDT, PCBs, PFCs, and PBDEs) in eagle populations in three national parks: the Mississippi National River and Recreation Area, the St. Croix National Scenic Riverway, and the Apostle Islands National Lakeshore.

PFCs are a group of chemicals that repel both water and oil, are used in a multitude of products including pesticides, non-stick coatings (PFOA), and stain repellents (PFOS), and have been found to be toxic to humans and wildlife.

These contaminants linger in the environment and the organisms that reside there, taking many years to disappear. Because of their persistence, these chemicals are found in ever-increasing amounts as they move up the food chain from prey to predator, a process known as "bioaccumulation."



Immature bald eagle. (NPS Eagle Survey)

The top predator retains the highest, and potentially most damaging, concentration of the contaminant. Bald eagles dominate the local food chain along rivers and lakes and therefore are among those species at greatest risk. If the concentration of a chemical is high in a nestling, it indicates the chemical is present in both other organisms and in the Mississippi River ecosystem.

During the Eagle Survey, researchers gather blood and feather samples from bald eagle nestlings on an annual basis to determine the level and trends of these six contaminants. Findings of the survey were compiled to assess where the contaminants are increasing or decreasing. The Mississippi National River and Recreation Area has the highest nest productivity of all areas sampled, averaging 2.2 chicks per nest.

This high level of productivity is believed to be associated with availability of prey more than any other factor. Contaminant levels varied between study areas and years. Mercury levels were lowest in eaglets sampled along the Mississippi River, while lead levels were among the highest. PFC levels in eaglets were high but generally declined between 2006 and 2011. PFOS levels appear to be declining due to the 2002 removal of PFOS from the market by 3M, its largest producer. No relationship was found between contaminant levels and eagle productivity, though nonlethal effects, such as endocrine disruption or neurological effects, were not examined.

The bald eagle population in the park and across the state is flourishing despite the presence of these chemicals, which is good news, but the long-term persistence of these contaminants and their effects on eagles and the environment remain unknown.

More information on the NPS Eagle Survey can be found at: www.nps.gov/miss/parknews/news-eaglesurvey.htm



1999 Big River Art Contest winner, Nick Langer. (NPS)

North Mississippi Regional Park Heron Rookery

On May 22, 2011 a tornado that struck north Minneapolis damaged an island in North Mississippi Regional Park that was home to a rookery of roughly 200 Great Blue Heron nests. Most of the adult Great Blue Herons flew away when they saw the tornado approach. Relatively few dead and injured adults were found on the island and along the shores of the Mississippi River; however, every single chick was blown out of the nests. The hundreds of surviving adult herons circled the island that was now covered in twisted and shredded trees searching for nests that no longer existed.

Park Rangers from the Mississippi National River and Recreation Area worked with the Minnesota DNR and the Animal Humane Society to retrieve injured adults and take them to the Wildlife Rehabilitation Center of Minnesota. Combined with the efforts of a few private citizens, three adult herons and nine chicks were recovered and sent for medical treatment.

All nine of the chicks grew in captivity and learned to hunt in a wading pool stocked with fish. By late July/early August they were strong enough to hunt and fly on their own. They were released at Coon Rapids Dam in late summer 2012.

As early as June 9, 2011 the herons that had lost their rookery were observed building new nests and incubating. Some birds headed six river miles north to an established rookery at Coon Rapids Dam. Others went over three river miles south and established a new rookery on the islands near Marshall Terrace Park.



Heron carrying new nest material. June 2011. (NPS)

Despite nesting late, many of the pairs were able to raise young with plenty of time before fall migration. The herons returned to the new rookery in 2012, which continues to grow as they add new nests. This is a testament to animal resiliency. It also shows that it's possible to cohabitate successfully with wildlife in urban areas.



Ranger Gordon Dietzman with rescued herons. (NPS)

Great Blue Herons are a common site along the park in spring, summer and fall. Nesting Great Blue Herons can be observed along the trail from East Coon Rapids Dam (**Map A20**). The rookery by Marshall Terrace Park (**Map B30**) can be viewed by taking the trails and stairs all the way down to the river's edge and looking north. It's handy to use a pair of binoculars or spotting scope to view the nests.



Heron rookery destroyed in May 2011. (NPS)

As the chicks grow, it's possible to hear their rhythmic clicking sound begging for food. Herons are hardy and do not leave this area until all the lakes and rivers are frozen. A handful of birds have been known to hang around all winter where there is open water and abundant food. Pigs Eye outflow (**Map D49**) is one of those areas.



NPS visitor center in the Science Museum of Minnesota. (NPS)

River Resources

The best source of information about the Mississippi River corridor between Dayton/Ramsey and Hastings, Minnesota, is the national park via either its web site (www.nps.gov/miss) or its visitor center in the lobby of the Science Museum of Minnesota, in downtown Saint Paul (651-293-0200). The Visitor Center has educational displays, books, free literature, and other materials, as well as park rangers who will answer questions. Children of all ages enjoy the huge aerial map of the national park embedded in the floor.

The **Mississippi River Field Guide**, at the Friends of the Mississippi River web site at fieldguide.fmr.org has detailed information about the river within the national park.

The **Metro Area Rivers Guide**, published by the Minnesota Department of Natural Resources, includes boating tips and safety information, as well as maps of the Mississippi, St. Croix, and Minnesota rivers.

The **Upper Mississippi River Navigation Charts**, published by the Army Corps of Engineers, is the road map that

towboat pilots and other commercial pilots use to navigate the river from the head of navigation to Cairo, Ill., on the Mississippi River, and the lower stretches of the Minnesota and St. Croix rivers.

Big River Magazine and its web site www.bigrivermagazine.com covers the river from the Twin Cities to the Quad Cities. Its web site includes a map of river overlooks and links to government agencies and nonprofit organizations involved with the river.

Pedal Minnesota is dedicated to working with organizations and people to make Minnesota the most bike friendly state. Their website at www.pedalmn.com provides links to bicycle maps and includes an interactive map browser.

Bike with a Ranger is a family-friendly way to explore the Mississippi River. Join us this summer on a three-hour, nine mile ride held every Saturday, from June through September (for exercise enthusiasts, each ride may burn up to 350 calories for a 150lb person!). For more information and trip schedules see www.nps.gov/miss/planyourvisit/bike.htm

The National Park Service is working with **Nice Ride Minnesota** to provide a convenient, easy-to-use bike sharing program that provides visitors and residents with a healthy, fun, and different way to get to the river and around town. Check out Nice Ride Minnesota's website at www.niceridemn.org to find a bike share station near you.

Check www.nps.gov/miss/index.htm and local community websites for additional information about parks, historic sites, and river access.



Riding the bus with a bike. (Metro Transit)



Mississippi River paddling. (Wilderness Inquiry)



Nice Ride Minnesota Station at the Science Museum of Minnesota. (NPS)

Biking Resources:

Nice Ride Minnesota

www.niceridemn.org

Twin Cities Bicycle Guide

bikeeverywhere.com

Bicycle Alliance of Minnesota

www.bikemn.org

Minnesota Great River Road

www.mnmississippiriver.com/great-river-road.cfm

Grand Round Scenic Byways

www.minneapolisiparks.org/grandrounds

Bike Walk Twin Cities

www.bikewalktwincities.org

National Park Service

www.nps.gov/miss/planyourvisit

Transit:

National Park Service

www.rivertripplanner.org

Metropolitan Council Parks and Trails

www.metrocouncil.org/parks/map/parksmmap

Metro Transit Trip Planner

metrotransit.org/TripPlanner

Minnesota Canoe Association

www.canoe-kayak.org

Smart Trips

www.smart-trips.org

River Conservation:

Minnesota Valley National Wildlife Refuge

www.fws.gov/midwest/minnesotavalley

Mississippi River Fund

www.missriverfund.org/

Friends of the Mississippi River

www.fmr.org/

Trust for Public Land

www.tpl.org

Audubon Minnesota

www.mn.audubon.org

Boating:

Army Corps of Engineers

Locking through:

www.mvp.usace.army.mil/docs/nav/locking.pdf
www.lrp.usace.army.mil/pubs/celrpp_1130_1_10.pdf

Navigation charts:

www.mvp.usace.army.mil/navigation/default.asp?pageid=589

Wilderness Inquiry

www.wildernessinquiry.org
www.nps.gov/miss/uwca.htm

MN Department of Natural Resources

Canoe routes: www.dnr.state.mn.us/watertrails

Minnesota Boating Guide: files.dnr.state.mn.us/rlp/regulations/boatwater/boatingguide.pdf

Mississippi Boating Guide (locking through):

files.dnr.state.mn.us/education_safety/safety/boatwater/miss_river_guide/mrg_boating_big_river.pdf

US Coast Guard (boating safety)

www.uscgboating.org (612-725-1871)

US Coast Guard Auxiliary (boating safety)

www.cgaux.org/

Metro Rivers Guide

http://files.dnr.state.mn.us/education_safety/safety/boatwater/metro_river_guide.pdf

Trails and Parks:

Mississippi National River & Recreation Area

www.rivertripplanner.org
www.nps.gov/miss/planyourvisit
www.dot.state.mn.us/maps

Lower St. Croix National Scenic Riverway

www.nps.gov/sacn
www.dnr.state.mn.us/waters/watermgmt_section/wild_scenic/wsrsivers/stcroix_lower

Mississippi River Trail

www.mississippirivertrail.org/ and www.dot.state.mn.us/bike/mrt.html

St. Anthony Falls Heritage Trail

www.mnhs.org/places/safhb/things_heritage

Great River Road/Minnesota Mississippi River Parkway Commission

www.experiencemississippiriver.com

Trails and Open Space Partnership

www.nps.gov/partnerships/miss_tosp.htm

Parks & Trails Council of Minnesota

www.parksandtrails.org

Explore Minnesota

www.exploreminnesota.com

For emergencies: Call 911

Trails and Parks:

Metropolitan Council

metro council.org/Parks.aspx

Anoka County Parks

www.anokacountyparks.com

Dakota County Parks

www.co.dakota.mn.us/parks/Pages/default.aspx

Ramsey County Parks

parks.co.ramsey.mn.us/Pages/default.aspx

Washington County Parks

www.co.washington.mn.us/index.aspx?NID=492

Minneapolis Parks and Recreation Board

www.minneapolis parks.org

Three Rivers Parks District

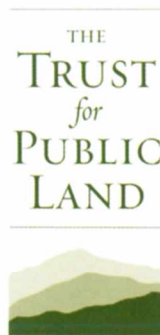
www.threerivers parks.org/parks.aspx

Saint Paul Parks and Recreation

www.stpaul.gov/index.aspx?nid=243

Minnesota Department of Natural Resources

www.dnr.state.mn.us/state_parks





Biking Safety

Before you bike

- Check that your bike is working properly.
- Do ABC check (air, brakes, chain)
- Talk to children about bicycling safety and courtesy.

On streets and roads

- Obey all traffic rules, and watch out for cars, trucks, and pedestrians.

On trails

- Keep to the right.
- Before you pass a walker or another biker, alert them and slow down.
- If you stop, get your bike off the trail.
- Respect other trail users.

Always

- Ride within your ability.
- Wear an approved helmet.
- Use lights when riding in the dark.
- Keep your headphones in your pack until you get off your bike.
- Stop and look both ways before crossing a street, road, or railroad tracks on a trail. Stop and look both ways before entering a trail.
- Watch out for wet leaves, loose gravel, and other slippery or uneven surfaces.
- Bring water.
- Travel with a companion in secluded areas.



Bikers wearing helmets and bright clothing. (NPS)



Bike commuter in winter. (NPS)

Boating Safety

Read the most recent **Minnesota Boating Guide** for rules and regulations, and the **Mississippi Boating Guide** for locking through and boating safety information. See River Resources on page 112 for web addresses to download these free from the Minnesota Department of Natural Resources.

Power boaters can improve their boating and safety skills by taking classes from the Dept. of Natural Resources, U.S. Coast Guard Auxiliary or other providers. Call BoatU.S. (1-800-336-BOAT or boatus.com/courseline) to find a course in your area.

Paddlers can improve their boating and safety skills by attending paddling classes, which are often available through sporting goods stores, schools, clubs, and associations.

Before you boat

- Check your gear. Make sure you have enough personal flotation devices and other required safety equipment.



Boating on the Mississippi. (NPS)



Red buoy on the right. (NPS)



River mile marker. (NPS)

- Check the weather for dangerous conditions and for dangerously high water.
- Tell someone where and when you will be boating, in case you need help.

When you boat

- Always wear a life jacket.
- Bring a spare paddle or oars.
- Don't overload your boat.
- Do not operate a boat while intoxicated or overly tired.
- Watch out for barge tows and large boats. They take a long time to turn or stop, have big wakes, and they may not be able to see you. Give them a lot of room and take into consideration how the wind, current, and wakes are affecting you and the other boat.
- Stay away from "strainers" (submerged trees, rocks, or structures) and bridge abutments. They can capsize a boat or trap someone underwater in a current.
- If the weather makes boating unsafe, get to shore and shelter quickly.
- Whenever you move your boat from one body of water to another, thoroughly wash the hull and live well to remove hitchhiking invasive species, so they do not spread.

Help stop the spread of Asian Carp

Many invasive species threaten the Mississippi River's ecosystems. Four species of Asian carp are among the most recent invaders and endanger other fish, wildlife and human use of the Mississippi. Evidence is growing that Grass, Silver and Bighead carp have arrived in the National River and Recreation Area. Hopefully, Black carp are still far downriver.

Asian carp can out-compete native fish for food. Silver and Bighead carp filter out massive amounts of plankton, which are critical to our native game fish during their early life stages and to our native filter feeders, like the American paddlefish. Grass carp mow down aquatic plants and Black carp devour mussels and snails. Together, these fish will undermine large parts of the aquatic ecosystem for native fish and wildlife.

All four species will arrive in large numbers, unless slowed or stopped. Locks and dams offer one way to slow their advance, especially Locks and Dam No. 1 and the Upper St. Anthony Falls Lock and Dam. Both have high, fixed-crest dams. The only way for the fish to get past these structures is through the locks. Every time the gates close, the structures become a solid barrier to fish migration.

For this reason, the National Park Service is no longer using the locks for its programming. We are also working to reduce the number of times recreational and other craft use the locks. You can help by boating only in one pool or trailering your vessels from one pool to the next, rather than going through a lock. More information can be found at: stopcarp.org and www.nps.gov/miss/naturescience/minimizing-lock-usage.htm



Silver carp, (T. Lawrence, Great Lakes Fish Commission)

Mississippi River Fund

The Mississippi River Fund is the proud charitable partner of the Mississippi National River and Recreation Area. Through generous gifts from the community, the fund provides crucial financial support for park programs that encourage community engagement and river stewardship.

Since 2005, the fund has awarded more than \$1.5 million to projects such as habitat improvement for endangered species, protection of our cultural icons, and environmental education.

Visit www.missriverfund.org and show your support for the river!

MISSISSIPPI
River Fund



Get aboard the Mississippi River Funds River Action Volunteer Events. (RAVE)

Volunteer Program

Volunteers at the Mississippi National River and Recreation Area work alongside our rangers on a wide variety of events and projects. Volunteers provide valuable assistance in restoring colorful native landscapes, providing new experiences and learning opportunities for school students, staffing events, and assisting visitors to find and enjoy recreational opportunities along the river.

Monthly Opportunity for Volunteer Enrichment (MOVE!) events offer volunteers the opportunity to learn a new skill or information about an area of the park. The **River Action Volunteer Event (RAVE)** program combines an outdoor activity such as canoeing or biking with riverside habitat restoration. To learn more about volunteer opportunities in the park and/or register for a volunteer event go to: www.nps.gov/miss/supportyourpark/volunteer



Youth volunteer events. (MOVE)



Coldwater Spring restoration volunteers. (NPS)



Big River Journey volunteers. (NPS)



Trails and Rails volunteers. (NPS)

Urban Wilderness Canoe Adventures

The Urban Wilderness Canoe Adventures (UWCA) is an outdoor canoe program focused on getting Twin Cities youth on the Mississippi River. Each UWCA trip provides students an opportunity to uniquely experience the Mississippi River while strengthening their outdoor skills and encouraging an active lifestyle outdoors.

The goal for the program is to reach over 10,000 youth and family annually, with an emphasis on reaching students from Minneapolis and St. Paul Public Schools and other youth and community-based organizations.

The UWCA is a partner program between Wilderness Inquiry, Mississippi River Fund and the National Park Service. To find out more about the program or to enroll in a trip, visit www.urbanwildernesscanoeadventures.org



Canoe adventure begins! (NPS)



Urban Wilderness Canoe Adventure.
(Brian Peterson, Star Tribune)

Big River Art Contest

All of the artwork in the Mississippi River Companion was created by winners of the NPS Big River Art Contest. The annual contest engages students in the science, heritage and stewardship of the Mississippi River through the practice of art.

Art is entered in any one of four categories, two of which require field trip attendance. In each category, a grand prize winner and three winners will be chosen. Prizes are awarded to both the winning students and their teachers. Winning artwork is displayed at the Mississippi River Visitor Center (Science Museum of Minnesota), other locations, and in galleries on our website at:

www.nps.gov/miss/forteachers/brjartgal.htm

The contest is open to all students in grades 4-6.



2003 Winner, Evelyn Mosby. (NPS)



2008 Winner, Tsuj Ntuj Kong. (NPS)



2010 Winner, Bee Thau. (NPS)

Trails and Open Space Partnership (TOSP)

The Trails and Open Space Partnership (TOSP) is a coalition of over 50 agencies and organizations that are working together to achieve “a continuous land and water based recreation trail, open space, and multimodal alternative transportation system along the Mississippi River in the Twin Cities metro area while protecting the river’s natural, cultural, and economic resources”. Since 1996 the TOSP has helped its partners secure funding, build consensus, and create awareness for its vision with local communities, the State Legislature, US Congress, and various national organizations and decision-makers.

Key partners include:

- Metropolitan Council
- Minnesota Department of Natural Resources
- Parks and Trails Council of Minnesota
- Minnesota Department of Transportation
- Regional Park Implementing Agencies
- Minnesota Valley National Wildlife Refuge (USFWS)
- Mississippi Trail Inc
- Local river communities
- Many non-profit organizations like:
 - » Trust for Public Land
 - » Saint Paul and Minneapolis Riverfront Corporations
 - » Friends of the Mississippi River
 - » Sierra Club
 - » Bike Walk Twin Cities

More information can be found at: www.nps.gov/miss/parkmgmt/tosp.htm or calling 651-293-8436, if interested in participating.



Trails and Open Space Partnership. (NPS)



Bike event on Harriet Island. (NPS)

[illegible]This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on its right side, suggesting it's resting on a surface.



National Park Service

U.S. Department of the Interior



2012 Winner, Laina Behrenbrinker. (NPS)

The **Mississippi River Companion** is your guide to exploring the Mississippi River National Park. Whether you're a bicyclist, boater, walker, paddler, or history buff, you'll want to have this guide in hand when exploring this beautiful river.

Use the **Companion** to find water trails, boat landings, marinas, bicycle and pedestrian trails, major landmarks, historical sites, parks, and natural areas along the Mississippi River.

There are unlimited recreational opportunities in this unique urban wilderness area. Pick a place of interest, plan your route with or without a car, then go Explore Your National Park!

Mississippi National River and Recreation Area Headquarters:

111 Kellogg Blvd E
Suite 105
Saint Paul, MN 55101
651.290.4160

Mississippi River Visitor Center

Located in the Science Museum of
Minnesota lobby
Saint Paul, MN 55102
651.293.0200

Email: miss_info@nps.gov

www.nps.gov/miss