ST. LOUIS RIVER ESTUARY NATIONAL WATER TRAIL MASTER PLAN

DULUTH, MINNESOTA & SUPERIOR, WISCONSIN

FINAL DRAFT FOR PARK BOARD REVIEW December 14, 2016

ACKNOWLEDGMENTS

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City of Duluth, MN

City of Superior, WI

St. Louis County, MN

Douglas County, WI

Minnesota Department of Natural Resources

Wisconsin Department of Natural Resources

Minnesota Land Trust

St. Louis River Alliance

Fond du Lac Band of Lake Superior Chippewa

Duluth Visitors Bureau: 'Visit Duluth'

The Chamber and Visitors Bureau – Superior, Douglas County Area

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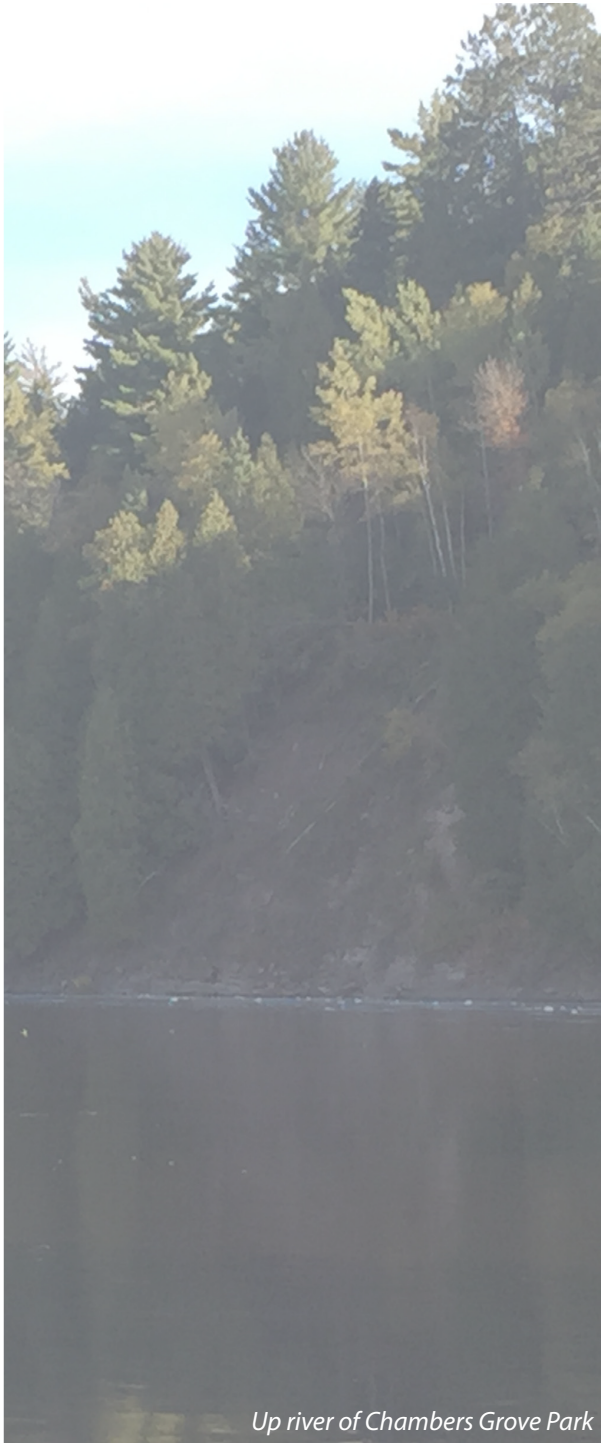


Up river of Chambers Grove Park

ACKNOWLEDGMENTS

Eastern edge of Spirit Lake, south of Clough Island

Key Stakeholders:

The Duluth Experience

Day Tripper of Duluth

Positive Energy Outdoors

Northland Paddlers Alliance

Spirit Lake Marina & RV

The Ski Hut

Duluth Sail and Power Squadron

Twin Ports Walleye Association

University of Minnesota Duluth - Recreational Sports Outdoor Program

College of St. Scholastica Outdoor Program

University of Wisconsin Superior - Superior Adventures

Lake Superior National Estuarine Research Reserve

Minnesota Canoe Association

Wisconsin Canoe Association

Wenonah Canoe

The Nature Conservancy

Duluth Audubon Society

Lake Superior & Mississippi Rail Road Co. (LSMRR)

Duluth Seaway Port Authority

On-going Project Outreach Partners for Continued Coordination

US Environmental Protection Agency (EPA)

US Fish and Wildlife Service

US Army Corps of Engineers

US Coast Guard

US Geological Service

National Oceanic Atmospheric Administration (NOAA)

National Weather Service (NWS)

Minnesota Pollution Control Agency (MPCA)

Minnesota Sea Grant

Wisconsin Sea Grant

Arrowhead Regional Development

Harbor Tech Advisory Committee (HTAC)

Minnesota Power

Minnesota Historical Society

Wisconsin Historical Society

Izaak Walton League

Ducks Unlimited

Morgan Park Community Club

Gary New Duluth Community Club

Riverside Community Club

Fond du Lac Community Club

CONTENTS

01 INTRODUCTION

PROJECT BACKGROUND 6
OVERVIEW OF THE ST. LOUIS RIVER ESTUARY AREA 7
PROJECT PARTNERS 8
KEY CONSIDERATIONS 8
MASTER PLANNING PROCESS 10

02 MASTER PLAN

OVERVIEW OF THE MASTER PLAN 12
MISSION STATEMENT 12
RECREATION GOALS 13
EDUCATION GOALS 40
RESTORATION AND CONSERVATION GOALS 42
COMMUNITY SUPPORT GOALS 48
PUBLIC INFORMATION DISSEMINATION GOALS 52
WATER TRAIL FACILITIES AND MAINTENANCE GOALS 62
PLANNING GOALS 64

Near Perch Lake Fishing Area

01. INTRODUCTION

Eastern edge of Spirit Lake

Project Background

The St. Louis River Estuary National Water Trail Master Plan (referred to in the remainder of this document as the Master Plan) is a unique opportunity to recognize one of the world's largest freshwater estuaries as a premier paddle destination that appeals to a wide range of skill levels and interests. The St. Louis River Estuary (referred to in the remainder of this document as the River Estuary) has a rich history as a water resource once used by Native Americans and Voyageurs and now serving the Twin Ports of Duluth and Superior as a working river. This rich history combined with the River Estuary's extensive natural resources, provides a tremendous opportunity to showcase this amazing resource to the paddling community.

Goals of the Planning Process

The Master Plan will address the design, development and operational management of a National Water Trail in the more wild and scenic portion of the River Estuary. The three primary objectives of the planning effort are:

- Creating the St Louis River Estuary Water Trail (referred to in the remainder of this document as the Water Trail) as a nationally significant water trail destination
- Coordinate a collaborative visioning/ planning process to gather the information and preferences necessary to develop a comprehensive master plan
- Develop a master plan that will act as a step-by-step guide for application to the National Parks Service for designation as a National Water Trail

Purpose of Seeking National Water Trail Designation

As with other currently designated National Water Trails across the nation, the designation will enhance the growth of outdoor recreation and tourism and provide increased awareness for river habitat preservation and restoration in the Twin Ports region. As outlined on the National Parks Service (NPS) website, the benefits of a National Water Trail designation include:

- Designation by the Secretary of the Interior, including a letter and certificate announcing the designation as a National Water Trail
- National promotion and visibility, including permission for the management entity to use the National Water Trails System logo in appropriate settings and trail publications
- Mutual support and knowledge sharing as part of a national network
- Opportunities to obtain technical assistance and funding for planning and implementing water trail projects

As a result of designation, National Water Trails also gain:

- Positive economic impact from increased tourism
- Assistance with stewardship and sustainability projects
- Positive contributions to public health and quality of life from the restoration and maintenance of watershed resources
- Access to networking and training opportunities
- Assistance with recognition and special events highlighting the trail

All National Water Trails will be included in the NPS's online searchable database of trails and will have a page on the NPS National Water Trails website where visitors will be able to find water trail descriptions, maps, photographs, water trail manager contact information, links to applicable websites, and best management strategies and practices.

The entry to Pokegama Bay

Overview of the St. Louis River Estuary Project Area

Significance of the Area as a Unique Fresh Water Estuary

The St. Louis River, the largest U.S. tributary to Lake Superior, has a watershed of 3,634 square miles (or about 1.8 million acres), much of which is forested. "Gitchi Gami Ziibi" as it is known by the local Fond du Lac Band of Lake Superior Chippewa, or "The River that flows into the great waters," enters Lake Superior at the southwestern corner of the lake between Duluth, Minnesota and Superior, Wisconsin. Before reaching Lake Superior, the St. Louis River flows approximately 179 miles through three distinct areas: coarse soils, glacial till and outwash deposits at its headwaters; a deep, narrow gorge at Jay Cooke State Park; and red clay deposits in its lower reaches.

As the river approaches Duluth and Superior it becomes a 12,000-acre freshwater estuary. The upper section of the River Estuary is characterized by wilderness-like areas, while the lower section is characterized by urban development, an industrial harbor and a major port. The upper section of the River Estuary from the Fond Du Lac Dam to the Highway 2 Bridge is the primary focus for this planning effort. The lower, more industrial section is not the focus of the national water trail planning process.

For centuries the River Estuary has been and continues to be a culturally significant location for Native Americans. The River Estuary has also been a location for European exploration and settlement including a fur trading post near the native village site of Fond du Lac. The River Estuary has historically been a popular location for fishing, trapping, logging, quarrying and steelmaking. In spite of human impacts on the landscape, this area still retains a diverse array of habitat types and species, some of which are rare and many of which are declining across their ranges.

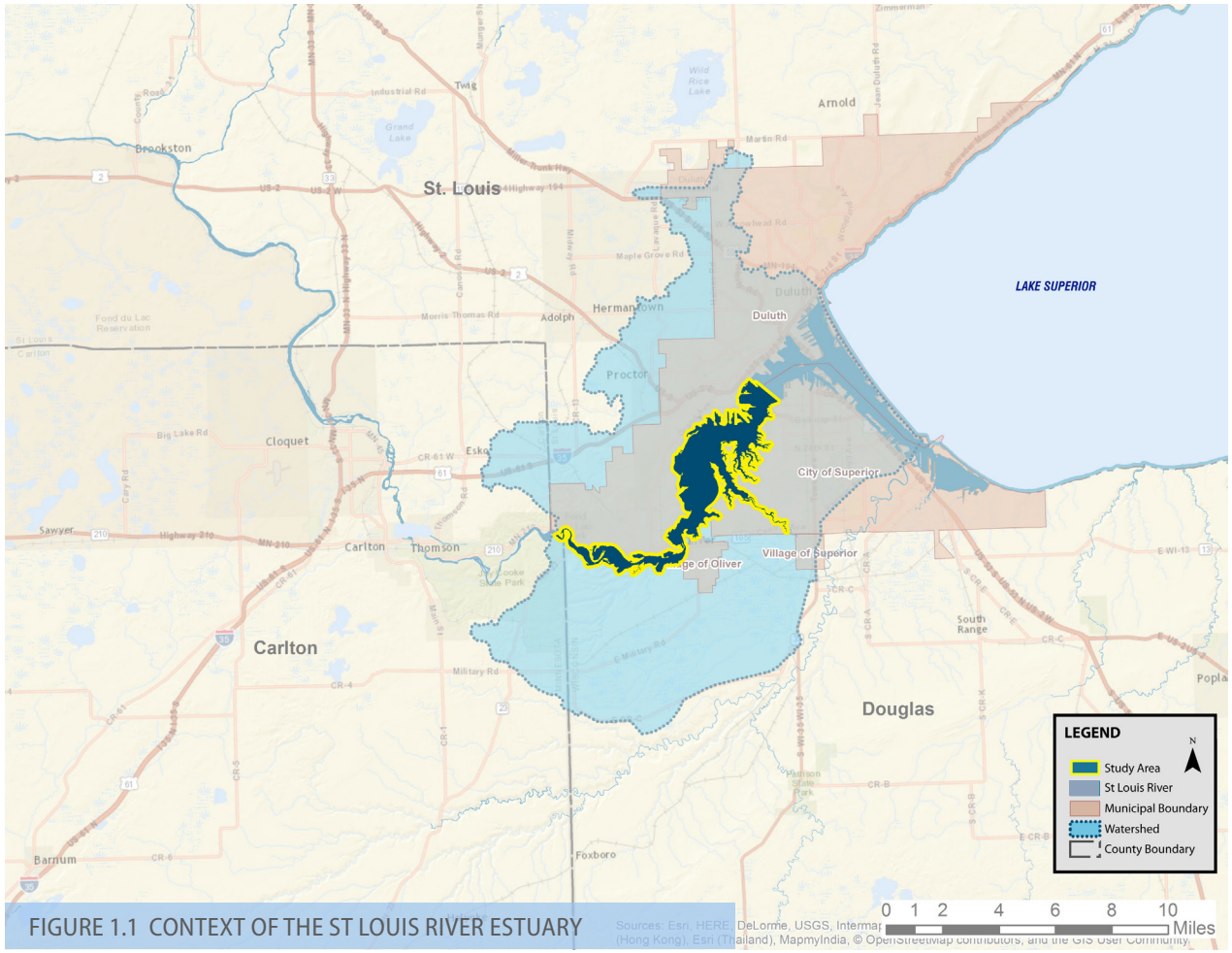


FIGURE 1.1 CONTEXT OF THE ST LOUIS RIVER ESTUARY

The lower portion of the watershed (from the City of Cloquet to Lake Superior) is one of 43 designated Areas of Concern (AOC) in the Great Lakes and is actively undergoing remediation to improve water quality and mitigate the effects of pollution caused by past industrial practices. The St. Louis River AOC is being addressed by the St. Louis River Remedial Action Plan, which was enacted in 1989 and focuses on improving water quality in the river.

The River Estuary remains a dynamic, evolving place, and the ability to traverse the water and be immersed in the river's varied landscape, ranging from the working ports of Duluth and Superior to the complex, diverse ecosystems throughout the River Estuary, make for a powerful experience. This diversity of experience, combined with active restoration of the river, make the River Estuary significant both regionally and nationally and provide the foundation for seeking designation as a National Water Trail.

Project Partners

As with many other multi-jurisdictional planning efforts, aligning partnerships and shared goals are key to creating a unified vision and championing the implementation of the plan. To help achieve this unified vision, three distinct groups have been instrumental in providing feedback and contributing to the planning process. First, a Leadership Team comprised of representatives from agencies from both the Minnesota and Wisconsin sides of the river provided key policy direction. Second, a key Stakeholder Group including representatives from paddling clubs, outfitters, and local college outdoor recreation programs participated in discussions on routing and facility needs and desires. Finally, an expanded Project Resource Group made up of representatives from a broader group of agencies, recreational organizations, and cultural resources organizations provided insight and input throughout the planning process.

Leadership Team

Key input for this master planning process was provided by representatives from the two local municipalities and counties, state regulatory agencies, and economic development and tourism groups:

- City of Duluth, MN
- City of Superior, WI
- St. Louis County, MN
- Douglas County, WI
- Minnesota Department of Natural Resources
- Wisconsin Department of Natural Resources
- Minnesota Land Trust
- St. Louis River Alliance
- Fond du Lac Band of Lake Superior Chippewa
- Duluth Visitors Bureau: 'Visit Duluth'
- The Chamber and Visitors Bureau – Superior, Douglas County Area
- National Park Service – Rivers, Trails & Conservation Assistance Program
- Duluth Sail and Power Squadron
- Twin Ports Walleye Association

Key Stakeholders

Members of this group brought a wealth of local knowledge about the project area and provided insight into the range of paddling and boating experiences to be found on the River Estuary. Organizations represented in this group included:

- The Duluth Experience
- Day Tripper of Duluth
- Positive Energy Outdoors
- Northland Paddlers Alliance
- Spirit Lake Marina & RV
- The Ski Hut
- Minnesota Power
- University of Minnesota Duluth - Recreational Sports Outdoor Program
- College of St. Scholastica Outdoor Program
- University of Wisconsin Superior - Superior Adventures
- Lake Superior National Estuarine Research Reserve (The Reserve)

Key Stakeholder Group Meeting to discuss paddling routes

Key Considerations

The Outdoor Recreation Economic Engine

Outdoor recreation is an economic powerhouse in the United States, annually generating $646 billion in consumer spending and 6.1 million direct jobs. Paddlers and other river users contribute a small, but significant portion of this annual consumer spending. As outlined above, key outdoor recreation markets and potential markets exist that could contribute to the stream of recreational and tourism income for the area. Designation as a National Water Trail can assist in targeting and capturing segments of those markets.

A Large, Nearby Paddle Population

To establish a clear picture of the make-up of river user groups and their potential size a combination of sources was used, including the Outdoor Industry Association's Consumer Segmentation Survey report, information from the Simmons One View data system (which uses Nielson Survey data), U.S. Census data reports, and local visitor bureau annual tourist visit counts.

Data for the Duluth-Superior metropolitan area indicate that 9.6 percent of the local population are either canoers or kayakers, which means that approximately 26,900 potential paddlers live in the greater metro area. Data for the Duluth-Superior tourist market shows that 8.4 percent of visitors to the Duluth-Superior area, approximately 235,200 people, are either canoers or kayakers. Together, these two market segments result in a total of 262,100 people already living in or visiting the area who may be interested in the type of unique paddling experience offered by the River Estuary.

While other nearby paddling areas such as the Boundary Waters Canoe Area will attract visitors and compete with the River Estuary, designation as a National Water Trail would help attract a significant percentage of these potential paddlers to the River Estuary. A conservative estimate is that 40% of these potential paddlers, or 104,840 people, would be attracted to the St Louis River Estuary Water Trail (referred to in the remainder of this chapter as the Water Trail). If the typical paddler visits the water trail multiple times annually, the visitation rate would be sizable. For instance, if the typical visitor paddles the River Estuary an average of 4 times per year, this would amount to an annual rate of 419,360 paddle outings per year on the River Estuary.

New Paddling Markets

Kayak Fisherman and Stand Up Paddlers (SUPs) constitute two new and evolving paddling markets that could potentially be drawn to the Water Trail. These river activities are so new that no national survey data is available yet from which to measure the size of these paddler groups. However, the Outdoor Foundation's Annual Outdoor Recreation Participation report states that over a three-year period Kayak Fishing increased by 20 percent while Stand Up Paddling increased by 24 percent. Currently, many water sports experts believe these to be the two fastest growing water sports and believe this trend will continue for the near future. Certain select areas of River Estuary would be very attractive to participants of these rapidly growing water sports.

An Existing State Water Trail Through the St. Louis River Estuary

The St. Louis River was legislatively designated in 1967 as a Minnesota State Water Trail, long before most states had organized paddle sports recreation infrastructure or designations. Many of the existing facilities (public water accesses, campsites, rest areas, etc.) on the river are the result of this designation. More information can be found on pages 58-61 on the Lake Superior and St. Louis River State Water Trails.

Motorized and Large Craft Boaters

The deeper, more navigable portions of the River Estuary host a variety of motorized boaters, the largest segments of which are runabout boats, under 20 foot boats, and pontoon boats. Combined these three segments represent well over half the motorized craft on the river.

Larger powerboats (30 foot and over) represent a small segment of watercrafts. Most of these boats have lounging and/or sleeping quarters and are capable of cruising Lake Superior, which is where they spend the majority of their time, only occasionally cruising the deeper portions of the River Estuary. Large sailboats (20 to 25 foot and 30 to 45 foot) are similar to large powerboats in that they have sleeping and eating quarters and are most often found on Lake Superior but occasionally sail or cruise the deeper waters of the River Estuary. It is more common to see the smaller (20 to 25 foot) motorized watercrafts on the river because of their shallower draft.

Estimates on the size of these boater and sailboat groups were not readily available, but boaters as a group will far exceed paddlers on certain days such as opening day of fishing season, waterfowl hunting season and calm, sunny days.

Commercial Vessels

The River Estuary is an active commercial shipping port and large commercial vessels, ranging from 400 to 1000 feet in length, travel in a federally designated navigational channel. These large ships create a sizeable wake, take time to alter course, and have a difficult time seeing canoes, kayaks and stand up paddle boards (SUPs) that move along side them. While the focus of this planning effort is generally outside of the majority of the active port, the paddling community should stay alert if venturing into this area. The Cities of Duluth and Superior do not support and will not support any constraints to the commercial shipping access and use of the federal navigational channel in the River Estuary.

Commercial shipping vessels in the St. Louis River Estuary

Anticipating On-going Collaborative Motorized and Non-motorized Use

The Cities of Duluth and Superior do not support, and will not support, any reduction in the current freedom of motorized boaters to access and use the River Estuary, and the potential National Water Trail designation does not in any way require local governments to restrict motorized use of the River Estuary. With the potential increase in the number of paddlers on the river both the paddle community and motorized boating community will work corroboratively to educate and inform one another to ensure that the river will always be a great place to fish, boat, and recreate.

Master planning Process

PHASE 1 : Research, Mapping, and Analysis

In the project's initial phase the planning team worked with the agency groups to develop a series of maps which were used to better understand planning issues, identify strengths, and understand the physical characteristics of the River Estuary landscape. The planning team conducted meetings with the Leadership Team to review the mapping and analysis and to help clarify the operational and management structure currently in place on the River Estuary.

A two-day Visioning Workshop with the Leadership Team began with a brainstorming session involving the Key Stakeholders Group

PHASE 2 : Visioning Workshop

A key component of the planning effort involved conducting a brainstorming workshop with the Leadership Team and key stakeholder groups. This design process engaged attendees through a variety of techniques including visual presentations on precedents and trends, informational boards, and around-the-table conversations using large maps and trace paper to sketch notes and collect design thoughts from the group (photo below). During this two-day session the planning team transitioned from idea generation to proposing preliminary concepts for paddle routes, key put-in/take-out locations, and key features needed for the Water Trail.

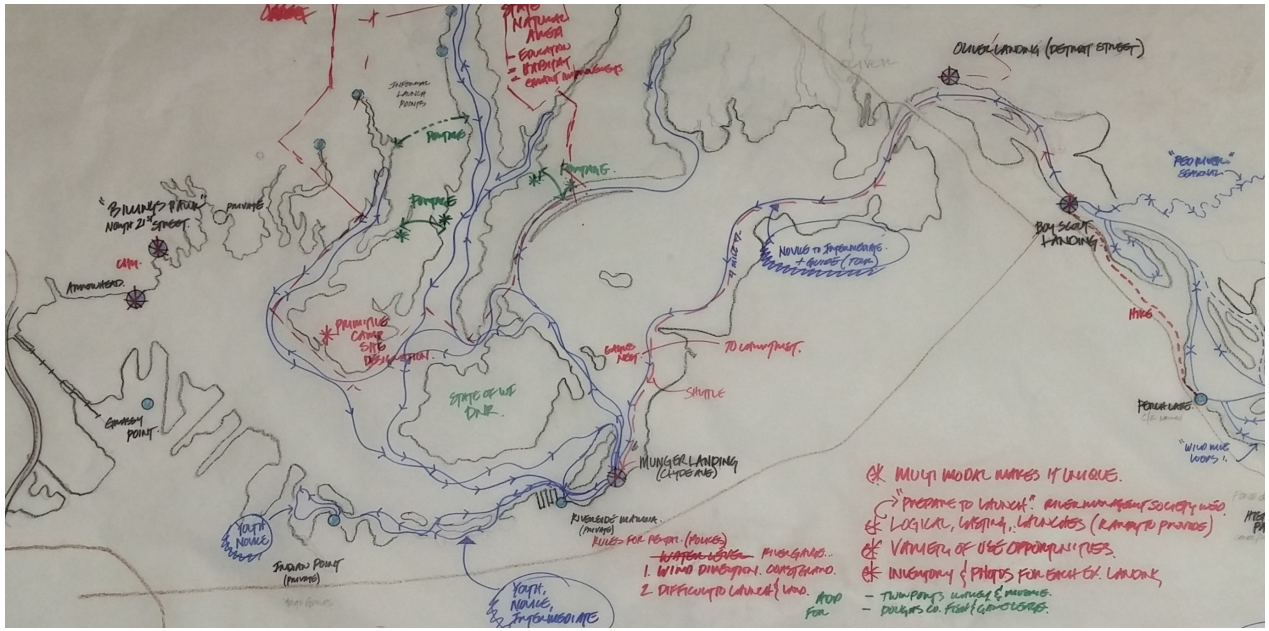
PHASE 3 : Master Plan

The creation of a master plan for the Minnesota and Wisconsin sides of the river is at the heart of this planning effort. By refining the ideas generated during the Phase 2 Visioning Workshop, the Master Plan creates a unified vision for the River Estuary experience. The plan articulates all of the essential elements needed to create a successful water trail system and support structure, with a particular focus on developing an areas and facilities maintenance strategy to guide Duluth, Superior and key agencies on both sides of the river.

A second round of feedback from the Leadership Team, Stakeholder Group, and two broader public meetings (that were held in both Duluth and Superior) was collected and refined the direction of the Master Plan. The planning team then incorporated this information into the final plan, which outlines a compelling vision for the Water Trail.

PHASE 4 : National Water Trail Application

The final phase involves compiling the information from this Master Plan and submitting a formal application to the National Parks Service. The Master Plan structure aligns with the National Parks Service Best Management Practices prescribed in the application. It is anticipated that City of Duluth Staff will assume the primary role of completing the application and submitting the information from this Master Plan to the National Parks Service.



Exploring water trail routing and facility locations with the Leadership Team during the Visioning Workshop

02. MASTER PLAN

New facilities at Arrowhead Fishing Pier and Boat Launch, Superior WI

Overview of the Master Plan

The Master Plan Chapter compiles the information collected during the planning process and organizes the desired direction for the St. Louis River Estuary Water Trail (referred to in the remainder of this document as the Water Trail) according to the structure of the National Parks Service's National Water Trails System Best Management Practices (BMPs). Conversation with the Leadership Team, Stakeholder Group and the general public was focused on these BMPs and on developing master plan goals related to these BMPs. This chapter includes the Mission Statement for the Water Trail and an extensive breakdown of the following:

- Recreation Goals
- Education Goals
- Restoration & Conservation Goals
- Community Support Goals
- Public Information Dissemination Goals
- River Trail Facilities and Maintenance Goals
- Planning Goals

Mission Statement

The Water Trail's Mission Statement reflects the multiple experiences available on this unique expanse of water and also references conservation, recreation and economic development initiatives in the Twin Ports area of Duluth and Superior. The St. Louis River Estuary (referred to in the remainder of this document as the River Estuary) is vital to the region. It is the unifying feature bringing multiple user groups to the area to enjoy and experience floating and paddling on the water.

Mission Statement

Create a definitive St. Louis River Estuary Water Trail Guide for river manager use in their efforts to provide a safe and enjoyable user experience.

The guide will aid in:

1) **Enhancing recreation and education opportunities,**
2) **Implementing restoration and conservation projects,**
3) **Increasing community support and participation through attention-getting public information campaigns,**
4) **Conceiving river maintenance techniques that enrich the river user experience and preserves the river's natural environment.**

Dock at Oliver public water access, WI DNR

Recreational Goals

#1 - Leverage the Extensive Outdoor Recreational Opportunities Surrounding the Twin Ports and St. Louis River Estuary

Trails

Duluth and Superior each possess extensive trail networks. The ability to offer multiple recreational experiences to paddlers on the Water Trail is an additional draw. Major trails in the area include:

- The Munger Trail
- Superior Hiking Trail
- Duluth Lakewalk
- Western Waterfront Trail
- Millennium Trail
- Cross City Trail and DWP Trail in western Duluth (soon to be completed)

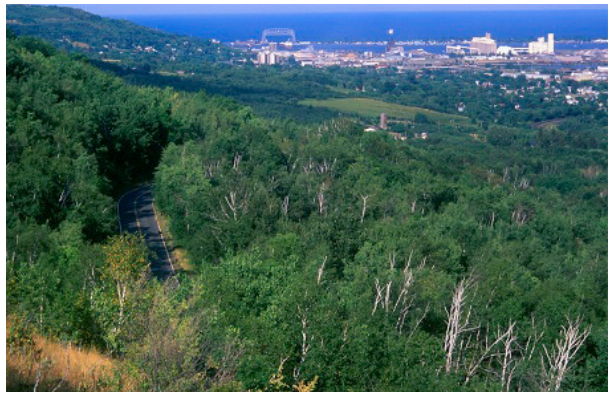
The Millennium Trail, Superior, WI

Mountain Biking

The Duluth Traverse a multi-use, single track trail purpose-built for mountain biking traverses the entire 26 mile long City of Duluth and anchors an extensive network of mountain bike trails in the area. Cyclists of the Gitche Gumee Shores (COGGS) in partnership with the City of Duluth and City of Superior have developed an extensive network of trails surrounding the Water Trail in Fond du Lac, Mission Creek, and along the Pokegama River.

#2 - Build on the Momentum Created by the St. Louis River Corridor Initiative - Expanded Park and Trail Projects

The St. Louis River Corridor Initiative invests in public park and trail improvements from Lincoln Park to the Fond du Lac neighborhood in Duluth. The overall goals of the Initiative are to support the natural environment, enrich neighborhood quality of life, attract new home buyers, establish new visitor destinations and stimulate appropriate development. Initiative projects are funded in part by $18 million in bonds, collected through the ½ and ½ tourism tax approved by the Minnesota Legislature in 2014. These funds will leverage additional dollars through community partnerships and grants. The graphic from the City of Duluth Parks and Recreation Department (page 14) highlights the mix of park, recreation and trail projects anticipated over the next five years.



Superior Hiking Trail in Duluth, MN

Western Waterfront Trail in Duluth, MN

Duluth Traverse mountain bike trail in Duluth, MN

St. Louis River Corridor Project Timeline

Trails

■ **Cross City Trail**
2015/2016: Mini Master Planning
I-25 to Zoo: under construction
2017: Zoo to Knowlton Creek
2018: Knowlton Creek to Spirt Mt. and Grand Avenue (pending funding)

■ **West DWP (Spirit Mt. to Becks Rd.) Multi-Use Trail**
2018-2020: Construction (pending funding)

■ **Grand Avenue Nordic Center**
2015/2016: Mini Master Planning
2017: Construction of 3 km lighted trail with snowmaking (pending funding)

■ **Superior Hiking Trail Improvements**
2015: Design of Ely's Peak, Spirit Mountain and Brewer Park loops
2016: Construction: Ely's Peak, Brewer Peak, Spirit Mountain
Design and construction: Enger Park and Bardon Peak

■ **Duluth Traverse Trail**
2015/2016: Design and construction of Lincoln Park segment, .8 miles; Mission Creek Trail Hub, 3 miles; St. Louis River Trail, 2 miles; Piedmont Connector, 1 mile; Brewer Park to Spirit Mt. (funding secured)
2018/2020: Spirit to Becks Rd.; Ely's Peak Loop

■ **Spirit all-weather mountain bike loop**
2015/2016: Design
2016-2017: Construction (pending funding)

■ **New Equestrian Trail**
2015: ✔ Feasibility Study complete
2016 Ely's Peak Loop design and construction
2017/2018: Additional trail development

■ **Fairmont/Norton Park Snowmobile Trail Restoration**
✔ Flood repairs complete
2016: Restoration of bridges
2016/2017: Additional work TBD

■ **ATV Trail**
2015/2016: Feasibility study and DNR Public Review
2016/2017: Construction (pending funding)

River Restoration & Access

■ **National Water Trail**
2015/2016: Mini Master Plan
2016/2017: Implementation/construction (pending funding)

■ **Western Waterfront Trail Restoration and Extension**
2015/2016: Planning and design of invasive removal and native replanting; trail surface restoration
2017: Western Waterfront Extension construction; Riverside to Morgan Park (pending funding)

■ **Kingsbury Creek River Connector**
2016-2018: Construction (pending funding)

■ **Kingsbury Bay Restoration**
2016: Planning
2017/2018: Construction

■ **Spirit Mountain River Connector**
2017: Natural surface Knowlton Connector Trail (pending funding)

■ **Tallas Island Paddle Center**
2016: Comprehensive Mini-Master Planning
2016/2017: Construction and implementation (pending funding)

■ **Indian Point Campground**
2016/2017: Mini-Master Plan
2018-2019: Construction (pending funding)

Grand Avenue Parks

■ **Lincoln Park**
2015/2016: Mini-Master Plan
2017-2018: Construction (pending funding)

■ **Wheeler Athletic Complex**
✔ Mini-Master Plan complete
2016-2018: Construction (pending funding)

■ **Memorial Park**
2015/2016: Mini-Master Planning
2016-2020: Construction (pending funding)

■ **Gary New Duluth Recreation Area**
2015/2016: Construction of Phase I & III

Other Projects

■ **Quarry Park**
2015/2016: Mini-Master Planning
2016/2017: Construction (pending funding)

■ **Wade Stadium**
✔ Tuckpointing, gates and netting complete

■ **Spirit Mountain Water System**
✔ Construction complete

■ **Fairmont Park/Zoo**
2015/2016: Master Planning
2016-2020: Construction)

■ **DWP Roundhouse Site Restoration**
✔ 2014: Land acquisition / Phase I invasive removal
✔ 2015: Phase II invasive removal and tree planting
2016: Final site restoration

■ **Park and Trail System Infrastructure Upgrades**
2016: Planning
2016/2017: Implementation of wayfinding, signage and barriers

■ **Chambers Grove Park**
2015: ✔ Completion of DNR Shoreline Restoration
2015/2016: Design and construction of park flood restorations and improvements

■ **Neighborhood Parks**
2015/2016: Mini-Master Planning for Piedmont, Harrison, Merritt, Grassy Point, Keene Creek, Norton, Smithville, Riverside, Blackmer, Fond du Lac, and Historical parks.
2016: Grant funds become available in June to qualifying parks

✔= indicates a completed project / or phase

ST. LOUIS RIVER CORRIDOR ■ Connecting People to the River

Summary map highlighting all of the St. Louis River Corridor Recreation Area initiatives

#3 - Leverage the Draw of Existing Major Regional Attractions

In addition to the miles of hiking and biking trails surrounding the Water Trail other major attractions provide a draw for the region and beyond.

Spirit Mountain Recreation Area

Spirit Mountain is a major recreational destination in the upper Midwest with over 75 groomed acres of skiing, 22 downhill runs with over 700' of vertical drop, and a newly upgraded lift. Combined with the Midwest's largest terrain park this is a popular destination for downhill skiing and snowboarding. The recent addition of the lower chalet along Grand Avenue and the anticipated expansion of the existing 22km of Nordic ski trails enrich Spirit Mountain as a wintertime attraction. In the summer, Spirit Mountain is home to an adventure park with an alpine coaster, zip line, scenic lift rides and disc golf. Newly constructed gravity mountain bike trails are also expanding Spirit Mountain's ability to draw outdoor recreation enthusiasts. A number of facilities are available for rent at Spirit Mountain Recreation as well.

Mont du Lac Recreation Area

Overlooking the River Estuary, Mont du Lac Recreation Area offers year- round affordable fun for the entire family with skiing, snowboarding, tubing, ski instruction, challenging 18-hole 'mountain' disc golf, chalet with full service bar & food. Facility rental is also available for weddings, reunions, groups, meetings or special events.

Lake Superior Zoo

Lake Superior Zoo is located next to Fairmount Park in Duluth near Indian Point Campground. The zoo first opened in 1923 and is home to roughly 400 animals and over 200 different species. The Lake Superior Zoo attracts approximately 85,000 visitors each year.

Superior Municipal Forest

The Superior Municipal Forest (SMF) is comprised of 4,400 acres of forest and natural habitat, making it the nation's third largest forest located within a city. It is the best remaining example of a boreal forest (conifers and hardwood, including white and red pine, balsam, cedar, black spruce, white birch, and aspen) in the state of Wisconsin. Activities in the SMF include: hiking, mountain biking, canoeing/kayaking/boating, archery hunting/ archery range, cross-country skiing/skijoring/ snowshoeing, snowmobile/ATV trails (winter months only), abundant wildlife & native plant communities, and a handicap accessible outdoor classroom for educational programming.

#4 - Promote the Variety of Year-Round Recreation Opportunities Along the St. Louis River Estuary

The following pages (16-19) highlight the broad range of supporting and complementary recreational opportunities surrounding the Water Trail. Figures 2.1 and 2.2 map the locations of many of these recreational features. The overview and corresponding maps highlight the relationship between all of these experiences and the anticipated Water Trail routes and facilities identified on the maps on pages 34-39.

Spirit Mountain, Duluth, MN

Lake Superior Zoo, Duluth, MN

Superior Municipal Forest on the eastern edge of the St. Louis River Estuary, the 3rd largest municipal forest in the nation.

WARM WEATHER RECREATIONAL OPTIONS COMPLEMENTING THE ST. LOUIS RIVER ESTUARY WATER TRAIL

Fishing

The annual fishing season opener is a popular event on the estuary. Walleye swim up river in the spring to spawn and remain in the river most of the summer. Other fish remain year-round including musky, northern pike, small mouth bass and pan fish, making this a popular destination for anglers.

Duck Hunting

Every fall the Wisconsin side of the river estuary becomes a popular location for water fowl hunting. Hunting is only permitted on the Wisconsin side of the estuary. *Information and hunting regulations* are available through the Wisconsin DNR.

Trapping

Trapping is a popular activity in State Natural Areas on the Wisconsin side of the estuary. Flowing river water, muddy channels and dense vegetation create ideal habitat for these small mammals. *Information and trapping regulations* are available through the Wisconsin DNR.

Wild Rice Harvesting and Restoration

Many of the backwater bays and sloughs along the St. Louis and Pokegama Rivers provide excellent growing conditions for wild rice. Restoration of wild rice is underway throughout the estuary, and special care should be taken to limit disturbance of these important resource areas.

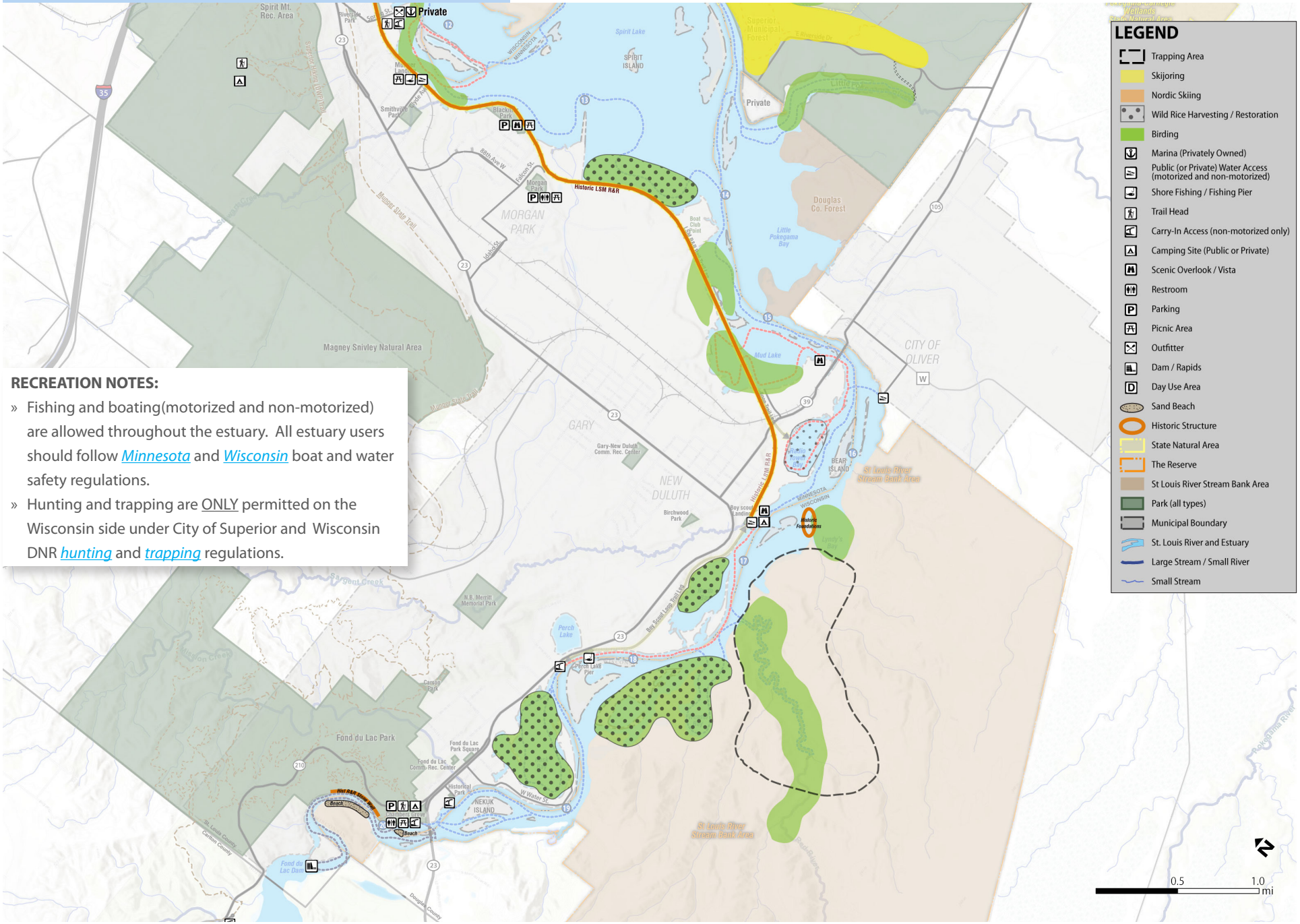
Birding

The estuary is a critical migratory stopover and key breeding area for 230+ documented bird species and has been designated by Audubon Minnesota as an 'Important Bird Area.' For a list of bird species commonly found in the estuary, see page 19 of the St. Louis River Alliance's "On The Water Guide."

Other Recreation and Activities

- Camping
- Hiking
- Mountain Biking
- Picnicking
- Swimming

FIGURE 2.1 RECREATION OPTIONS ON THE ST. LOUIS RIVER ESTUARY (WEST)



RECREATION NOTES:

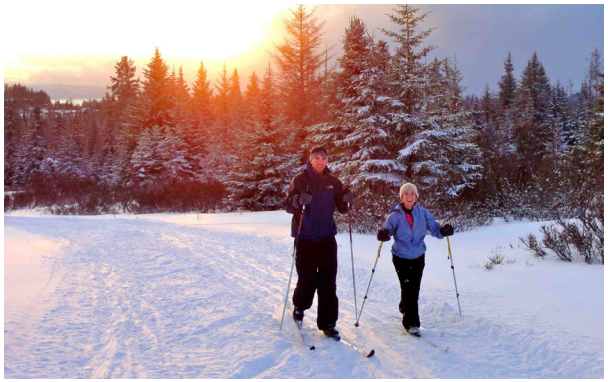
» Fishing and boating(motorized and non-motorized) are allowed throughout the estuary. All estuary users should follow *Minnesota* and *Wisconsin* boat and water safety regulations.

» Hunting and trapping are ONLY permitted on the Wisconsin side under City of Superior and Wisconsin DNR *hunting* and *trapping* regulations.

COLD WEATHER RECREATIONAL OPTIONS COMPLEMENTING THE ST. LOUIS RIVER ESTUARY WATER TRAIL

Nordic Skiing

Extensive trails can be found in the Magney Snively Natural Area and the Superior Municipal Forest. Expansion of Nordic ski trails are proposed as a future project near the base of Spirit Mountain.



Skijoring

Dedicated trails for skijoring can be found in the Superior Municipal Forest on Dwight's Point. These trails create an out-and-back loop experience.

Snowshoeing

Many hiking trails in Duluth and Superior transform to snowshoeing routes in the winter. Miles of trails can be found on both sides of the estuary.

Ice Fishing

Areas of the estuary are popular spots for ice fishing and host numerous events throughout the winter season.

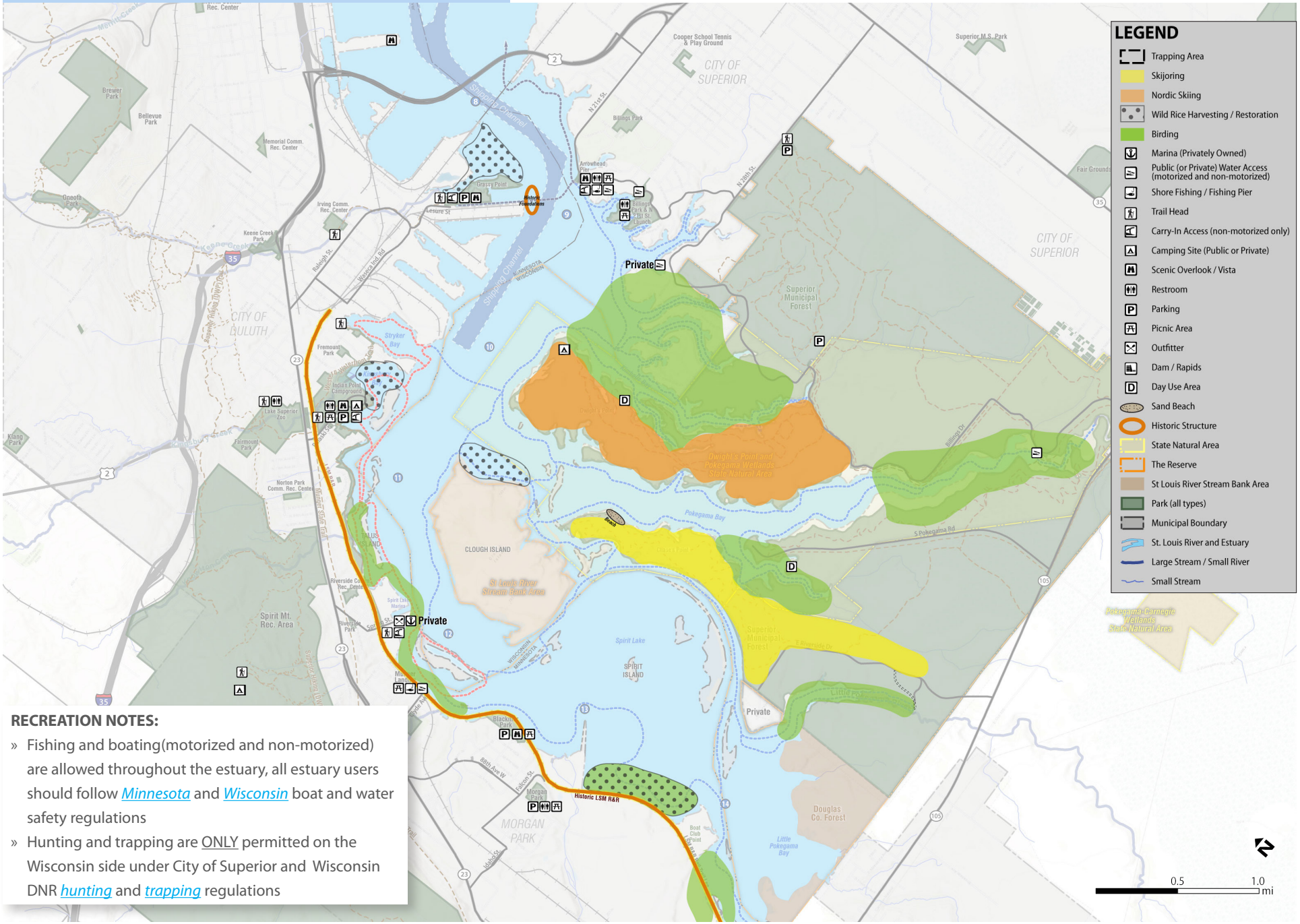
Ice Boating

The broad open water of Spirit Lake and further downstream provide opportunities for ice boating.

Other Winter Recreation Activities

- Fat Tire Biking
- Snowmobiling
- Ice Skating
- Dog Sledding

FIGURE 2.2 RECREATION OPTIONS ON THE ST. LOUIS RIVER ESTUARY (NORTH)



RECREATION NOTES:

» Fishing and boating(motorized and non-motorized) are allowed throughout the estuary, all estuary users should follow *Minnesota* and *Wisconsin* boat and water safety regulations

» Hunting and trapping are ONLY permitted on the Wisconsin side under City of Superior and Wisconsin DNR *hunting* and *trapping* regulations

#5 - Leverage the Many Experiences on the St. Louis River Estuary

Beyond the extensive surrounding recreational amenities, the St. Louis River Estuary offers an unmatched range of paddling experiences. From the narrow gorge and bubbling rapids just south of the Fond du Lac dam, to the quiet and tranquil bach channel fingers of Kimball's Bay, to the rust-colored water of the Pokegama River, to the expansive open water of Spirit Lake and the working river area downstream, there is a vast array of paddling experiences. This diversity provides opportunities for all abilities and interests as well as a variety of distinctive paddle routes and loops. This diversity also promotes return visits throughout the seasons. Pages (20-23) highlight the unique characteristics of the River Estuary and its surroundings.

1. St. Louis River Gorge

- Sense of enclosure along the gorge
- Historic rail ruins
- White water rapids
- Fond du Lac Dam

SOURCE: STANLEY GREENBERG

2. The Wild St. Louis River

- Backwaters and bays, with several islands
- Natural character, limited development along riverfront
- Variety of experience options and route choices

SOURCE: STANLEY GREENBERG

3. Red River Slough

- Sense of enclosure and solitude
- High quality birding area
- Productive area for trapping
- Seasonal access

SOURCE: HKGI

4. Little Pokegama Bay

- Tranquil and natural
- Sense of enclosure and solitude
- High quality birding area
- Surrounded by accessible public lands

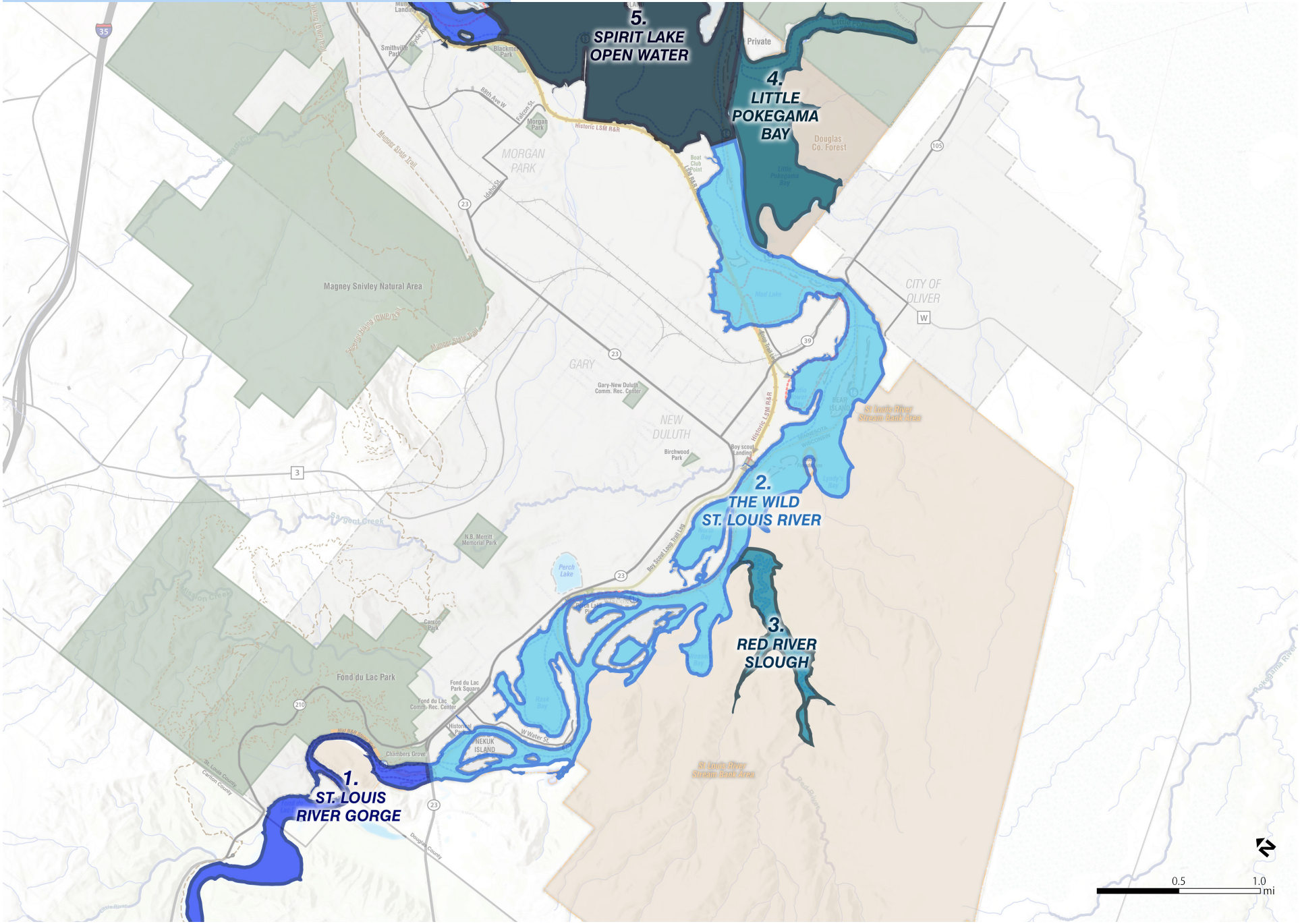
SOURCE: <NO INTERSECTING LINK>

5. Spirit Lake Open Water

- Expansive scenic landscape views
- Wide open water
- Great fishing
- ***Caution: Open water + strong winds can produce dangerous conditions in this zone***

SOURCE: ST LOUIS RIVER ESTUARY

FIGURE 2.3 EXPERIENTIAL ZONES OF THE ST. LOUIS RIVER ESTUARY (WEST)



6. Pokegama Bay

- Sense of enclosure and solitude
- Top paddling destination by those 'in the know'
- Abundant wildlife
- Protected from wind and waves

SOURCE: EARTH DESIGN CONSULTANTS

7. Superior Bays

- Stunning views and scenic landscape
- Secluded and peaceful
- Top paddling destination by those 'in the know'
- Excellent wildlife and birding area
- Protected from wind and waves

SOURCE: HKGI

8. Protected Bays

- Novice level paddling
- Access to many parks and restoration areas
- Wealth of adjacent activities
- Option for short loops from many put-in sites

SOURCE: ST LOUIS RIVER ESTUARY

9. Big Open Water

- Great views of Duluth
- A wealth of adjacent activities available
- Easy to navigate
- Access to Clough Island
- ***Caution: Open water + strong winds can produce dangerous conditions in this zone***

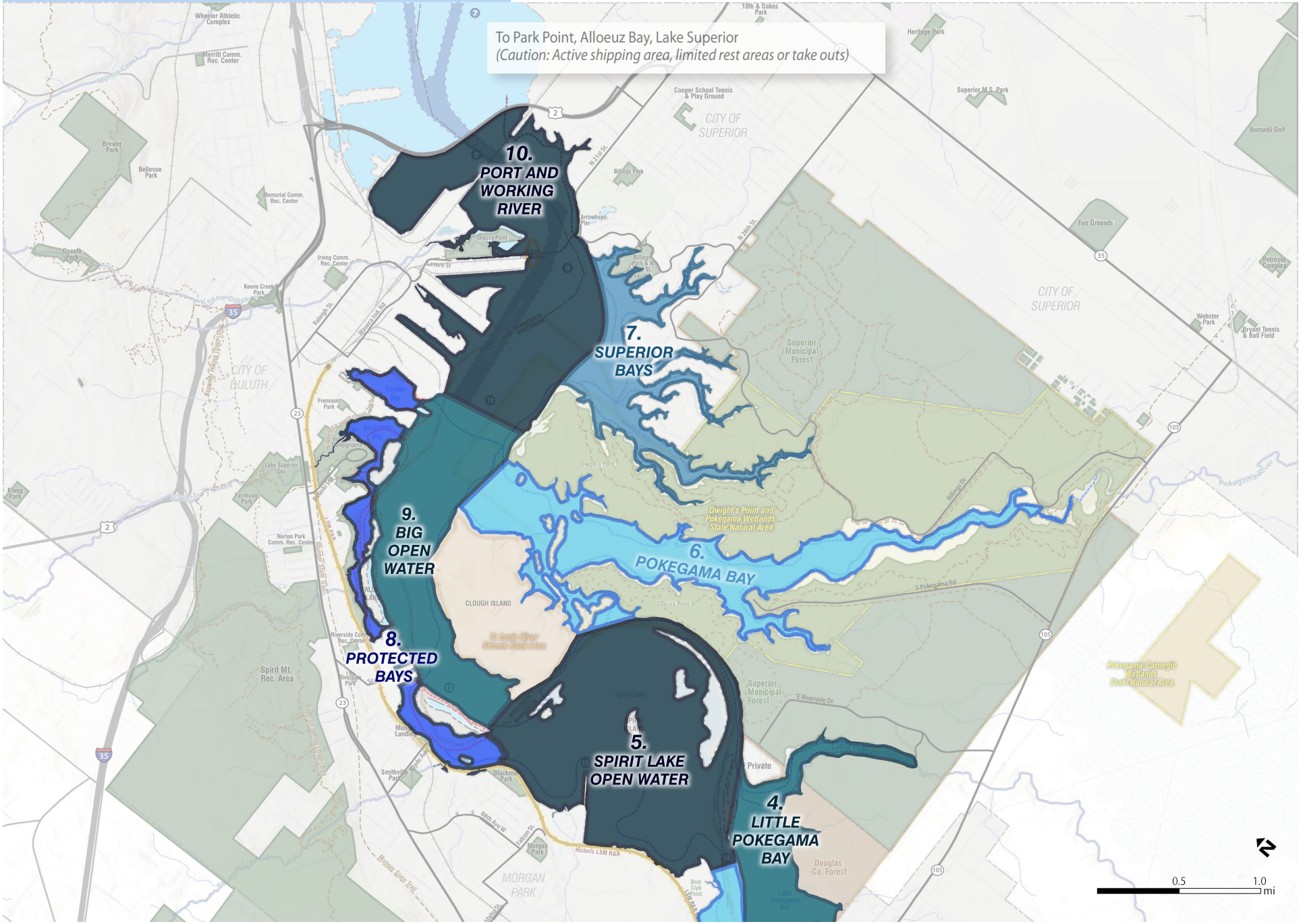
SOURCE: HKGI

10. Port and Working River

- Great views of Downtown Duluth and bridges
- Access to Superior/Duluth shopping and amenities
- ***Caution: Active shipping and strong wind + open water can produce dangerous conditions in this zone***

SOURCE: UNKNOWN

FIGURE 2.4 EXPERIENTIAL ZONES OF THE ST. LOUIS RIVER ESTUARY (NORTH)



#6 - Promote and Develop the St. Louis River Estuary Water Trail for All Skill Levels and Varied Experiences

Defining the Segments of Paddlers

The plan for the Water Trail identifies four segments of paddlers and aligns the range of skill levels with the various routing options on the estuary. Table 2.1 on page 25 aligns the unique experiences found on the Water Trail with the following segments of paddlers and their differing skill levels.

Exercise Oriented (represents 30% of paddlers)
This group has a penchant for very active paddling and perfecting their skills. They will paddle at high intensity levels on a weekly basis, and they will routinely paddle upriver against significant currents, which increases the intensity of their paddle and eliminates the need for the traditional car shuttle. With the right craft, many will defy windy conditions like those experienced on Spirit Lake.

Two thirds of this group is motivated by the desire to socialize with friends who share similar high levels of energy and competitive drive. The other third here are the most competitive and performance oriented paddlers. They work hard to perfect their paddling skills and relish opportunities for either competing against others or striving to routinely beat their personal best paddling times. This group will paddle as much as three times faster than other paddlers. As an example, if the average paddler paddles 1.5 miles per hour, members of this group will be more likely to paddle upwards of 5.5 to 6 miles per hour.

Exercise Oriented Paddlers

Adventure Oriented (represents 14 % of paddlers)
This group is motivated by the need for adventure, seeking new places and visiting new unique points of interest. In other words, lengthy paddles to different places motivates them most.

Adventure Oriented Paddlers

Nature Oriented (represents 46% of all paddlers)
This group is motivated by the enjoyment and experience of connecting with nature and learning about the river's ecosystems and natural history. This group enjoys visiting points of interest such unique bird sanctuaries and historic sites such as Native American sites, Voyageur forts, etc. A little more than half of this group [56%] will paddle a significant distance to see a series of unique points of interest. Their rate of a paddle will be in the 1.5 to 2 miles per hour rate. A slightly smaller portion of this group [43%] is not as physical. They will paddle at slower rates of speed and will avoid longer distances. In other words, they are less focused on the adventure of covering lots of geography and more focused on reaching points of interest in closer proximity.

Nature Oriented Paddlers

Comfort Oriented (represents 26% of all paddlers)
This group is characterized by a strong desire for good weather outings where the sun is shining and the warm, fresh air feels good. They paddle at low-intensity levels similar to the energy exerted on a short, easy walk on a paved trail. Their low level intensity is intentional. A little more than half [54%] of this group may have the physical ability to paddle lengthy distances, but they view paddling as a very physical outdoor activity. Many in this group may not have been exposed to outdoor

Comfort Oriented Paddlers

activities in their youth and may have some fears or initial hesitation about paddling. Further, they value bringing creature comforts along with them and care little about paddling any real distance. A little less than half [46%] of this group may have a real propensity for river paddling, but are hindered by physical limitations. The limitations can be attributed to weight issues, permanent physical injuries or the typical mobility loss with aging. This is the group that has a need for ADA accessible landings. In some cases, they will have a need for adaptive paddling equipment. With the aging Baby Boomer population this group could become a sizable group in the next decade.

Defining the Segments of Boaters

Similar to paddlers, various boater groups cruise the river seeking particular experiences. Many small boaters are on the water to hunt waterfowl or fish. Their river usage is influenced by the regulated DNR seasons and the availability of game. Thus, they dominate the river during season openers and their presence gradually declines as the legal season proceeds. Trappers are a much smaller group than anglers. During the trapping seasons these groups want easy, quick access to their favorite locations on the river. The amenities they desire are available gas stations, bait shops and sporting goods stores. Other small boaters and pontoon users are leisurely in nature and seek a comfortable day or afternoon on the river. Larger powerboats and sailboats are small in number. Their biggest need is a full-service marina where they can obtain food items, gas and other boating retail needs.

TABLE 2.1 - SUGGESTED WATER TRAIL LOOPS, SKILL LEVELS AND PADDLER SEGMENT MATRIX

	SKILL LEVEL			PADDLER SEGMENT			
Trail Routes	**Novice**	**Intermediate**	**Expert**	**Exercise**	**Adventure**	**Nature**	**Comfort**
Radio Tower Relay	X					X	X
Pokegama Bay Paddle	X				X	X	
Tallas Adventures	X	X					X
Boy Scout Shuttle	X		X	X	X		X
Red River Run		X			X	X	
Little Pokegama Seasonal Loop		X				X	
Spirit Lake Loop		X	X	X	X		
Clough Island Circuit		X	X	X	X	X	
St. Louis River Excursion		X	X		X		X
Superior Bays			X	X		X	
Fond du Lac Voyage			X	X	X	X	

Fishing opener on the St. Louis River 2015.

#7 - Highlight the Variety of Unique Water Trail Routes

Collaborative planning with key stakeholders identified a list of suggested water trail loops that best showcase the diversity of experiences in the Estuary and provide options for visitors of all skill levels and interests. Loops are grouped into three skill level categories and each loop is accompanied by information and special considerations that are useful for planning a water trail outing. Loop locations are identified in Figures 2.5 & 2.6 on pages 27 and 29, and Table 2.1 on page 25 provides a summary of the loop skill levels and paddler segments.

Note on water trail conditions

On wider areas of the river and under calm wind conditions a "Novice" or "Intermediate" paddler could easily navigate these waters. However, with the occasional sudden change in wind conditions these areas can quickly become impassible for even some of the "Expert" paddlers. The same sudden condition changes can become true during river flooding. Thus, a 'Paddle Craft Warning' system similar to the "Small Boater Warning" system on Lake Superior could be a consideration at some point. Local paddlers participating in the Stakeholder Group's listening sessions suggested this warning system idea.

Another area of consideration is motorized boating areas, commercial shipping lanes and commercial dockage areas. Most paddle routes, as seen on paddle maps, are routed around commercial dockage areas and avoid shipping lanes. But paddle routes should be able to cross shipping lanes when necessary when proper visibility allows. Equally important, paddlers should cross perpendicular to the shipping lane, minimizing the paddler's time spent in the actual shipping lane. It is recommended during extreme fog conditions, paddlers are to avoid crossing commercial shipping lanes altogether.

The last area of consideration is periods of high motorboat traffic. Paddlers are encouraged to paddle alongside rather than in the heavily used boating routes. Narrow channels and bridges will increase boat traffic congestion. Paddlers and motor boaters should exercise good judgment and respect each other's desires. If possible paddlers should move to the side of the river channel while motor boaters remain in channel. In fishing and waterfowl hunting areas paddlers should give wide berth to the sportsman. These paddling practices help ensure all river users can have an enjoyable river experience while sharing the river with other river users.

NOVICE TRAILS

Boy Scout Shuttle

Length: 3-4 miles

Points of Access: Existing Boy Scout Landing public water access, existing Perch Lake carry-in access

Experiential Estuary Zones: The Wild St. Louis River

Activities: Fishing, birding, wild rice, camping, scenic overlook/vista, hiking

Description: This intermediate distance trip can be done entirely on the water, or as a relay with some members of a party travelling the first leg of the relay on a multi-use trail

Special Considerations: Wild rice restoration areas are sensitive habitats and their disturbance should be avoided

Radio Tower Relay

Length: 1-3 miles

Points of Access: Existing Oliver public water access, proposed carry-in access(s) at Radio Tower Bay

Experiential Estuary Zones: The Wild St. Louis River

Activities: Fishing, birding, wild rice, hiking, scenic overlook/vista

Description: This short loop highlights the historic Oliver Bridge, the Radio Tower Bay restoration area and through the causeway at Mud Lake

Special Considerations: Wild rice restoration areas are sensitive habitats and their disturbance should be avoided

Tallas Adventures

Length: 1-7 miles

Points of Access: Existing public water access at Munger Landing, existing carry-in access at Indian Point Camp Ground and Spirit Lake Marina(Private), proposed carry-in access at Tallas Island

Experiential Estuary Zones: Protected Bays

Activities: Fishing, birding, wild rice, duck hunting (Wisconsin side only), scenic overlook/vista, picnic, camping, hiking

Description: This short to intermediate distance trip explores many of Duluth's estuary bays and has beautiful long views across the open water

Special Considerations: Wild rice restoration areas are sensitive habitats and their disturbance should be avoided

Pokegama Bay Paddle

Length: 5-9 miles

Points of Access: Existing Billings Park access, or Proposed carry-in access(s) along Billings Drive and State Highway 105

Experiential Estuary Zones: Pokegama Bay

Activities: Fishing, birding, Nordic skiing, skijoring, wild rice, duck hunting (WI side only), beach, portaging

Description: This intermediate to long distance trip explores the immersive natural environment of the Little Pokegama River delta. Public land surrounds this loop, making it an ideal place to explore the area's natural habitat and wildlife diversity from the water or by land

Special Considerations: Trip distance and difficulty level will vary depending on seasonal water flow and water level of the Little Pokegama River

INTERMEDIATE TRAILS

St. Louis River Excursion

Length: 2-8 miles

Points of Access: Existing public water access(s) at Oliver, Boy Scout Landing; existing carry-in access at Perch Lake, Historical Park, Chambers Grove

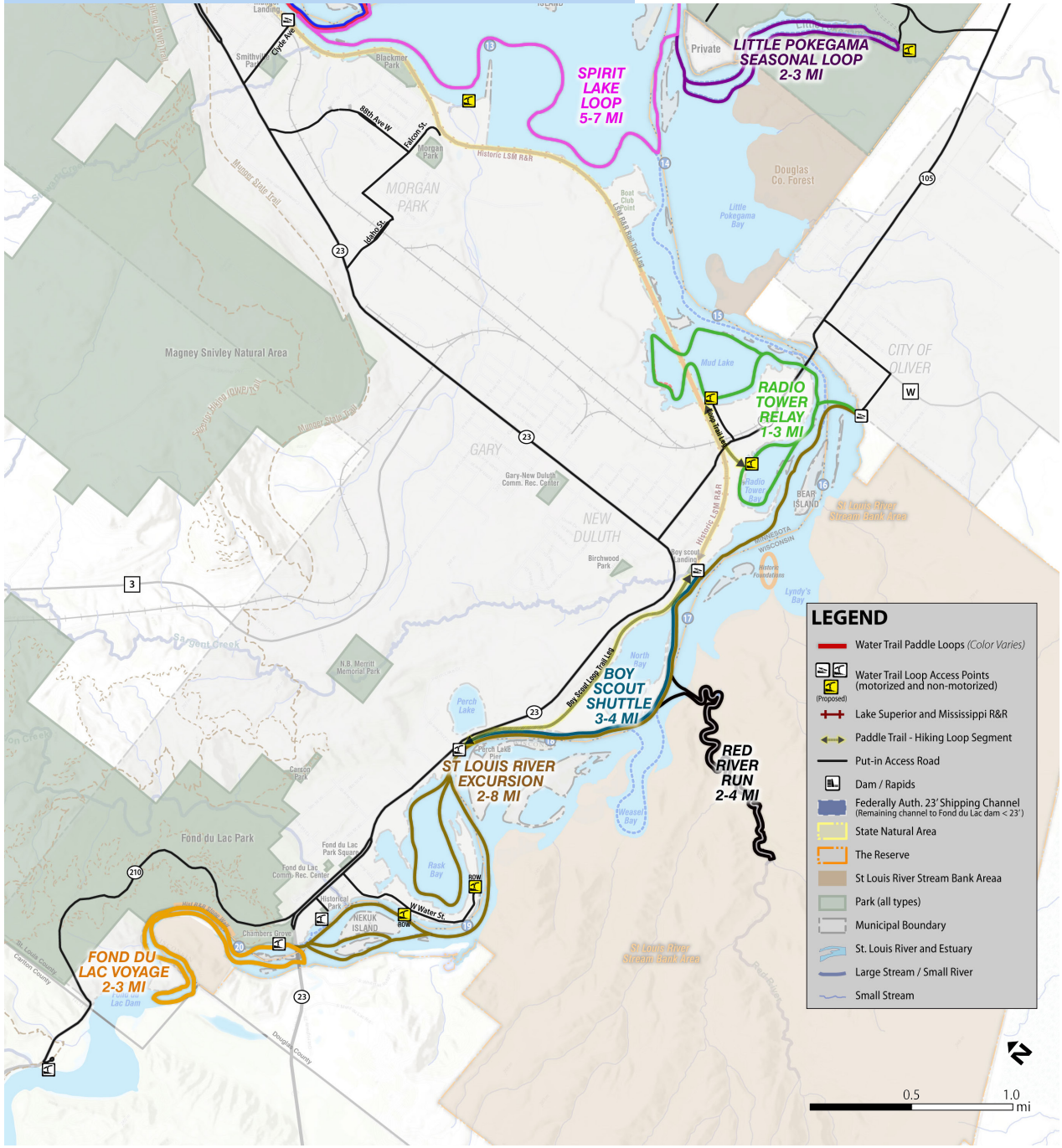
Experiential Estuary Zones: The Wild St. Louis River

Activities: Fishing, birding, wild rice, duck hunting (Wisconsin side only), scenic overlook/vista, camping, picnic, historic site

Description: This short to intermediate length trip provides impressive views of the St. Louis River landscape and historic sites along the way

Special Considerations: Several historic sites and wild rice restoration areas occur along the loop; care should be taken not to damage or disturb these resources

FIGURE 2.5 SUGGESTED WATER TRAIL LOOPS (WEST)



INTERMEDIATE TRAILS (CONT.)

Red River Run

Length: 2-4 miles

Points of Access: Existing public water access at Boy Scout Landing, existing carry-in access at Perch Lake

Experiential Estuary Zones: The Wild St. Louis River and Red River Slough

Activities: Fishing, birding, duck hunting (Wisconsin side only), trapping, hiking

Description: This short seasonal trip offers excellent bird and wildlife observation with impressive scenery and views of the rugged landscape surrounding the river

Special Considerations: Trip distance and difficulty level will vary depending on seasonal water flow and water levels of the Red River and St. Louis River

Little Pokegama Seasonal Loop

Length: 2-3 miles

Points of Access: Proposed carry-in near State Highway 105 / E Riverside Drive

Experiential Estuary Zones: Little Pokegama Bay

Activities: Fishing, birding, hiking

Description: This short seasonal trip offers excellent bird and wildlife observation with impressive scenery and views of the rugged landscape surrounding the river

Special Considerations: Trip distance and difficulty will vary depending on seasonal water flow and water levels of the St. Louis River.

Spirit Lake Loop

Length: 5-7 miles

Points of Access: Existing public water access at Munger Landing, existing carry-in access at Spirit Lake Marina(Private), proposed carry-in access near Morgan Park

Experiential Estuary Zones: Spirit Lake Open Water

Activities: Fishing, birding, wild rice, scenic overlook/vista, picnic, skijoring, portaging

Description: This intermediate distance trip provides scenic long views of Spirit Mountain and the landscape

Special Considerations: This large open water area is commonly used by motorized watercraft and can be prone to high winds; proper caution and planning should be exercised when travelling this loop. The U.S. Steel site is currently undergoing remediation, pollution levels on the site may be hazardous for visitors

Clough Island Circuit

Length: 5-6 miles

Points of Access: Existing public water access at Munger Landing, existing carry-in access at Spirit Lake Marina(Private)

Experiential Estuary Zones: Spirit Lake Open Water, Pokegama Bay, Big Open Water

Activities: Fishing, wild rice, duck hunting (Wisconsin side only), skijoring, beach, picnic

Description: This intermediate distance trip offers scenic long views across open water and provides access to the remote and interesting features of Clough Island

Special Considerations: This large open water area is commonly used by motorized watercraft and can be prone to high winds; proper caution and planning should be exercised when travelling this loop

Superior Bays

Length: 3-12 miles

Points of Access: Existing public water access at Billings Park and Arrowhead Pier, existing carry-in access at Arrowhead Pier, existing private water access along Billings Drive, proposed carry-in access along Billings Drive

Experiential Estuary Zones: Superior Bays

Activities: Fishing and fishing pier, birding, camping, picnicking, scenic overlook/vista, portaging, archery

Description: This short to long distance trip has some of the most spectacular scenery in the entire estuary with steep rocky cliff faces and long panoramic views of Duluth and the surrounding area

Special Considerations: Much of the shoreline along this loop is privately owned, and some areas of open water can be prone to high winds; proper caution and planning should be exercised when travelling this loop

EXPERT TRAILS

Fond du Lac Voyage

Length: 2-3 miles

Points of Access: Existing carry-in access at Chambers Grove and Historical Park

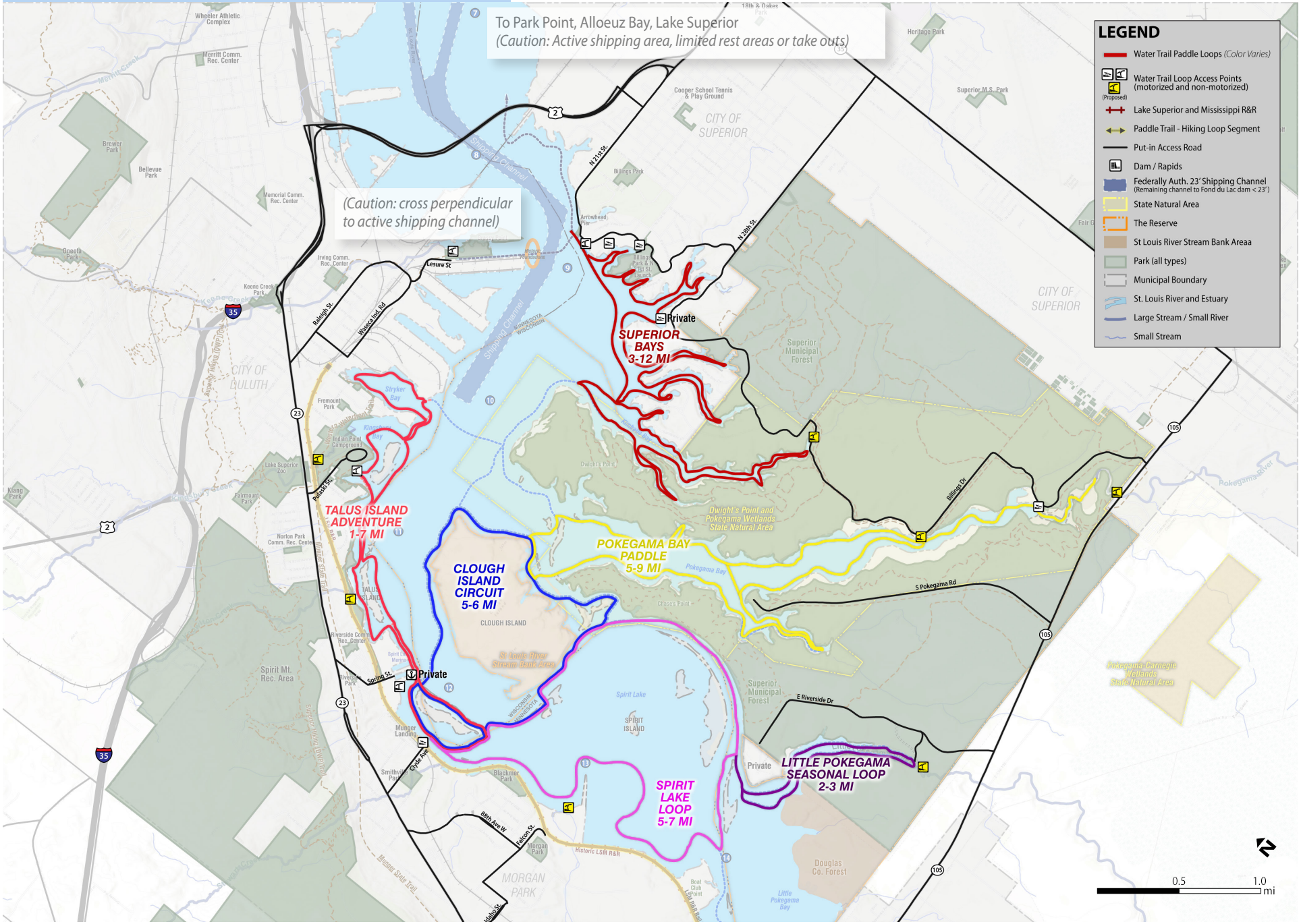
Experiential Estuary Zones: St. Louis River Gorge

Activities: Fishing, picnicking, hiking, historic site

Description: This short paddle provides views of historic railways and the steep, rocky faces of the St. Louis River Gorge downstream of the Fond Du Lac dam

Special Considerations: This area contains rapids, shallow areas, and fast moving water and is recommended for experienced paddlers only

FIGURE 2.6 SUGGESTED WATER TRAIL LOOPS (NORTH)



#8 - Improve and Expand Water Trail Facilities

Sites and Site Design

The most common types of sites are boat ramps, carry-in access, primitive campsites, rest areas, viewing sites, and portages. Careful thought must be given to the design and construction of these sites to ensure some degree of consistency regarding quality and standards across sites along the river. Consistency is particularly important for the Water Trail because this waterway is managed by two different state DNR's as well as a variety of other local, state and federal agencies. Establishing a St Louis River Estuary Water Trail Design Committee with representation from both sides of the river (see discussion on page 58) as well as relevant federal agencies is recommended. The maps on pages 34-39 identify potential locations for new facilities.

General Site Design Guidelines

Site construction or restoration must avoid unnecessary cutting and removal of trees and other vegetation, which should only be removed when they pose a safety hazard or obstruct proper access between the water and the site. Water access from sites should be constructed with native soils and rock, which provides a more natural look and reduces the introduction of possible invasive species. The design would need to accommodate fluctuations in water levels.

Site locations should be based upon two guiding principles: fit within the Water Trail route and hardiness of the site. Specific site locations must fit within the overall scheme of the Water Trail route. For instance, a site should offer scenic value or should be located a proper distance. The hardiness of the site should also be an important factor in site selection. The site must also be hardy enough to endure the natural wear and tear of human usage.

Sites identified in this document may have varied elements based on use and location in the River Estuary, for example primary locations may be located near tourism hubs and have features such as a dedicated non-motorized launch, ADA accessibility, restrooms (portable), changing areas, staging areas, and informational kiosks etc. Secondary access sites would be less developed with carry-in access and cater to lower traffic locations in the River Estuary.

Campsites, Rest Areas & Portages

For Campsites, cleared tent pad areas should allow for 2 to 4 tents depending upon the size of the designated site. Tent pads will be flat or semi-flat with a slight slope of 2 percent or less to allow for proper water drainage in the typical rainstorm. Depressions should be avoided, reducing chances of wet floor syndrome during periods of rains.

Primitive sites should have a minimum of amenities, such as a gradual riverbank slope, steel fire rings or grates with wind protection, and sustainable native grasses in the walking areas of the site. Additional camping was desired by the user groups throughout the planning process.

Portages will require more significant vegetation removal. They are to be routed in such a way as to provide the shortest possible distance between the two bodies of water, but should also be routed through areas with more hardy soils and vegetation. The treadway will be a maximum of 4 feet with a 2 to 4 percent cross slope. Uphill and downhill should be held to 10 percent grade with 4 percent being optimal. Banks or hills exceeding 10 percent will require switchbacks. Proper water drainage techniques will be employed so as to minimize erosion and reduce the frequency of significant maintenance repairs. Where there

Staging areas are important features to have at all water access points.

Steel fire grates at campsites

Consider ADA access at strategic, primary locations

Campsites should allow for 2-4 tents

Campsites should be located in durable locations

Consider strategic locations for water sources

are soils prone to rapid erosion, trail treadway hardening techniques, such as blending flat, native rocks into the treadway, will be employed.

Site Signage

Site signage systems should meet two criteria: they should have some degree of consistency with local and national water trail signs; and they should be easily visible and understandable to all river users. Whenever possible, all sites will use signage symbols consistent with those already in use. For example, Minnesota's Water Trails program has an established signage system on both the Upper and Lower St. Louis River. In cases in which river land managers differ on styles of sign, compromises will have to be made.

Sites in Sensitive Areas

In sensitive areas such as the Dwight's Point and Pokegama State Natural Area all proposed sites will be reviewed by the land manager with authority for governing the area. If established sites in sensitive natural areas start to exceed acceptable levels of annual usage, the Water Trail managers will either implement plans designed to reduce usage to acceptable levels, relocate the site, or consider increasing the number of overall sites to ensure that the number of sites meets the demand for sites. If the final option is used, selection of new sites must be carefully planned to ensure that they are attractive to users and will draw users away from overused sites.

Site Construction Regulatory Authority

State and local municipalities will work in partnership to finance and construct improvements with specific roles and responsibilities that will be agreed upon on an on-site specific basis.

The following agencies and organizations have regulatory authority and may to be contacted either when developing new sites or rehabilitating existing sites:

- Superior and Duluth Parks and Recreation Depts.
- Wisconsin and Minnesota Departments of Natural Resources
- St. Louis County and Douglas County
- US Fish and Wildlife Service
- National Estuarine Research Reserve
- US Army Corps of Engineers
- Fond du Lac Band of Lake Superior Chippewa
- Environmental Protection Agency/Minnesota Pollution Control Agency
- Coast Guard - Navigation Regulations
- Port Authority - Harbor Regulations
- MN Power - Dam related Regulations
- Minnesota and Wisconsin Departments of Transportation
- Railroads - Burlington Northern, Canadian National

Existing site modifications

Where designated water trail facilities will be designed into existing public water accesses due to over-crowding, designs should work to provide areas to keep motorized and non-motorized uses separated. This will provide for a safer user experience. Additional parking may be needed to accommodate the additional water trail use at existing public water accesses.

Site Maintenance

It is important that there be local commitment to maintaining sites along the river. Typically, state and federal agencies are too far removed

geographically to properly monitor and maintain river sites. Thus, it is critical that local agencies or groups accept the job of maintaining these sites.

Typically, site maintenance is assigned to a city, township/village or county through a formal agreement. Another option is for a citizen's group, such as a the St. Louis River Alliance or the Northland Paddlers Alliance, to assume all or a portion of the annual maintenance duties. Another option for providing routine maintenance on sites along the river is to initiate an Adopt-A-Site program, which operates in a similar manner as the DOT's Adopt-A-Highway program. To form this program all the river sites must first be inventoried and individual annual maintenance needs identified. Second, a comprehensive list identifying groups that may be willing to adopt-a-site is created. Third, a promotional eye-catching campaign is created and implemented. Lastly, the governing agency enters into agreements with each group that wishes to adopt a site or sites.

For the Adopt-a-Site program to work effectively, an experienced coordinator must be hired who is responsible for: 1) preparing an on-going promotional campaign; 2) preparing and authorizing work agreements; 3) finding replacement groups for groups that retire from the program; and 4) supervising and inspecting to ensure site maintenance is being accomplished.

Possible partners in site design and maintenance efforts are as follows:

- Northland Paddlers Alliance
- The Duluth Experience
- Day Tripper of Duluth
- Positive Energy Outdoors
- North Shore SUP

#9 - Improve and Expand Water Trail Programs

Water trail programming can take a variety of different forms including lessons, outings, equipment rentals, guided and self-guided tours, classes, and events. Local organizations, many of which already provide some of the programming and services listed below, can and should be involved in the expansion of program opportunities along the Water Trail.

Public and Commercial Paddle Services

Paddling Clubs:

These clubs currently provide organized outings as well as opportunities to learn from experienced instructors and refine paddling techniques. Such clubs can also provide outings organized according to skill level, from beginner to advanced.

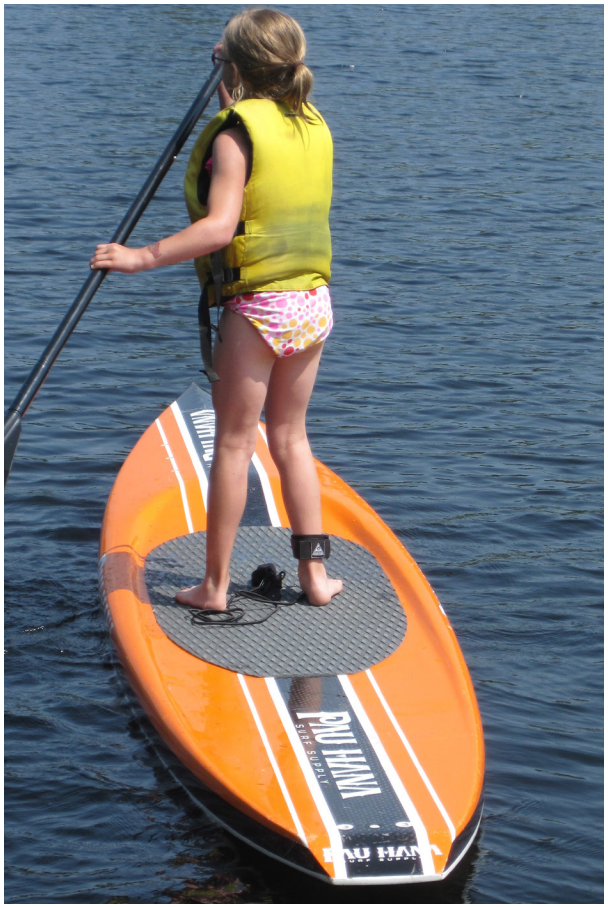
Rentals:

The University of Minnesota-Duluth (UMD) Recreational Sports Outdoor Program offers equipment available to everyone, not just students and staff members. The program currently offers high quality gear at an affordable price, including canoes, sea kayaks, stand-up paddler boards, canoe trailers, and fishing gear. Other potential partners who may be able to enhance this program or provide additional access to equipment includes the Ski Hut, Spirit Lake Marina & RV, Daytripper of Duluth, and The Duluth Experience.

Classes or Lessons

Children's Introduction to Kayaking

The focus of this program is to learn safety, develop paddling skills, and to have fun. Participants would learn how to enter and exit a kayak safely, paddle a straight line, and spin-on-a-dime through both dry land and water instruction. Classes could hosted



Guided Tours along the St. Louis River

Guided Tours along the St. Louis River are already being provided by a number of paddling groups and outfitters

and taught by the UMD, Duluth or Superior Parks and Recreation, or other river user groups.

Stand-up Paddleboard (SUP) Lessons
This rapidly growing sport is a fun way to explore and play on the calmer portions of the River Estuary. SUP's also provide full body exercise and enhances balance. Groups such as the North Shore SUP, Day Tripper of Duluth, and UMD currently provide lessons and equipment rental.

River Ecology
The River Estuary possesses a rich natural history that would allow a partner organization such as the Hartley Nature Center, the St. Louis River Alliance, or the National Estuarine Research Reserve to provide a river ecology education from multiple perspectives. Programs could include lessons on aquatic plants, river mammals, amphibians, birds, fish, water quality and invasive species. In addition programs could address the history of the river, both in its interaction with humans over the centuries and its long-term natural evolutionary processes. A solid understanding of the river's natural history can begin to provide an understanding of the meaning and scope of this unique river estuary basin.

Tours

Full Moon Paddle
Guided canoe trips under a full moon provide paddlers with opportunities to watch for deer, beaver, herons, and other wildlife while being entertained with stories from knowledgeable guides. All equipment is provided. Reservations required.

Family River Adventures
This program allows participants to discover the fun of canoeing on the scenic River Estuary. Participants can look out for birds of prey, navigate picturesque backwaters, and experience an adventure that can be enjoyed by grandparents and grand kids alike. One family member in a canoe must have experience. All equipment and shuttle are provided and reservations required.

Outdoor Adventures
Expert guides, experiential learning, and local knowledge are combined to create fully-supported day trips that connect participants to amazing adventures that are safe and accessible to all skill levels. Providers offer a variety of adventures, including St. Louis River paddling as well as cycling and mountain biking. Partners currently offering organized adventures and paddling excursions include:

» Guides: The Duluth Experience, Spirit Lake Marine, Day Tripper of Duluth, and UMD
» Events: St. Louis River Alliance, Wilderness Inquiry
» Shuttle Services: Various local outfitters, LSSMR, Duluth Transit Authority (DTA)

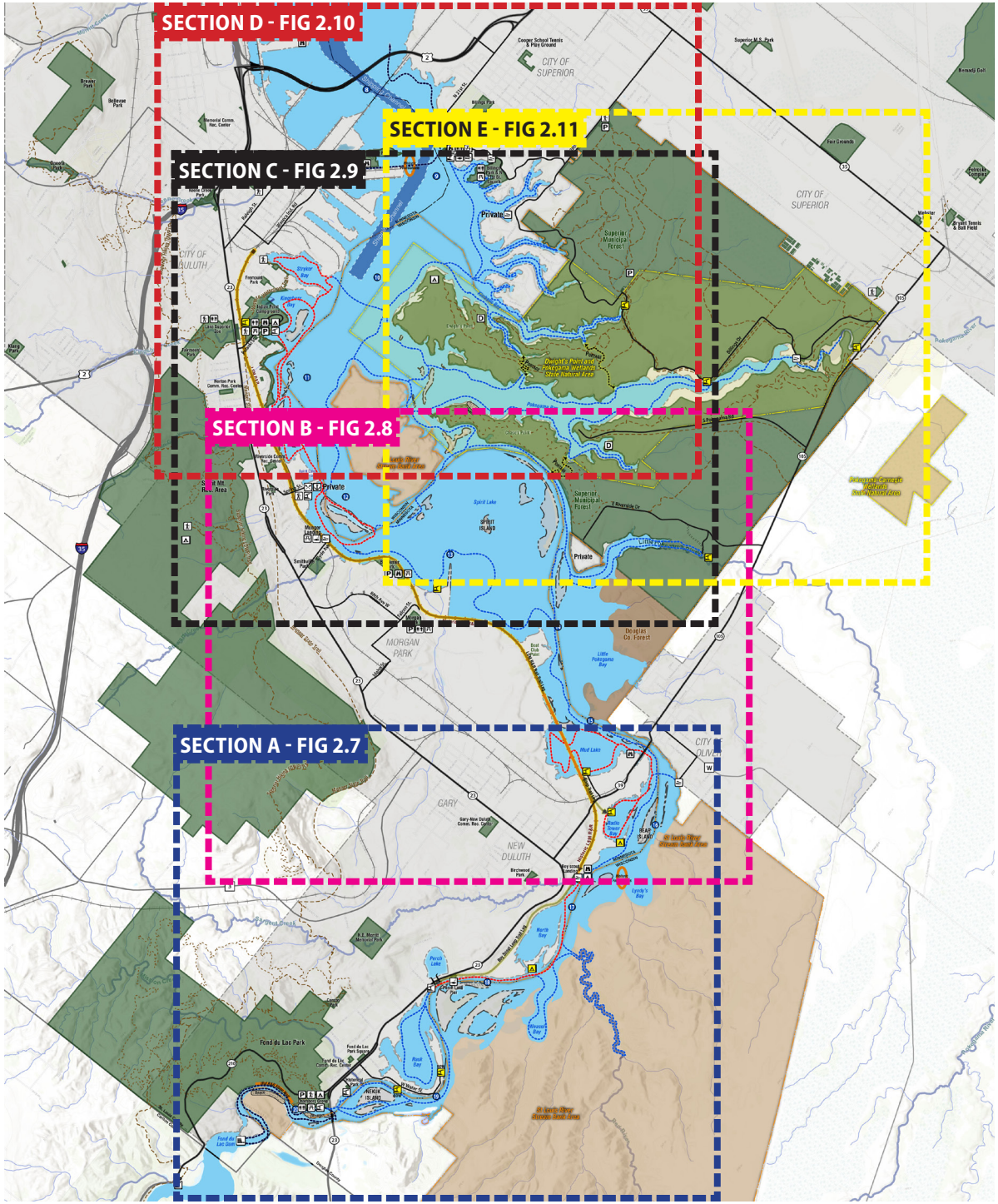
#10 - Continue to Plan for and Develop a Paddle Center for the St. Louis River Estuary Water Trail

Prior to this Master Plan there was a community and stakeholder discussion led by the City of Duluth surrounding the creation of a paddle center for the River Estuary. While a site has yet to be determined, the proximity to major amenities and attractions such as Spirit Mountain Recreation Area, Indian Point Campground, and the Lake Superior Zoo combined with the shallow, sheltered bays on the Duluth side of the River Estuary make this area an attractive location for a paddle center. The stakeholder engagement process identified key features for a paddle center desired by users including: parking, staging area, changing rooms, gathering areas, picnic tables, a water source and waste receptacles. The City of Duluth and river user groups should continue conversations and further partner to leverage an initial capital investment allocated through the City's St. Louis River Corridor Initiative.

Wilderness Inquiry cosponsored "St. Louis River Discovery Days" with the City of Duluth in September 2014, launching from Chambers Grove Park.

St. Louis River Estuary Water Trail & Facilities Mapping

The following maps (Figure 2.7—2.10) identify the various routes and both existing and proposed sites of the proposed St. Louis Estuary Water Trail.



The potential National Water Trail designation does not in any way restrict any motorized use of the St. Louis River Estuary

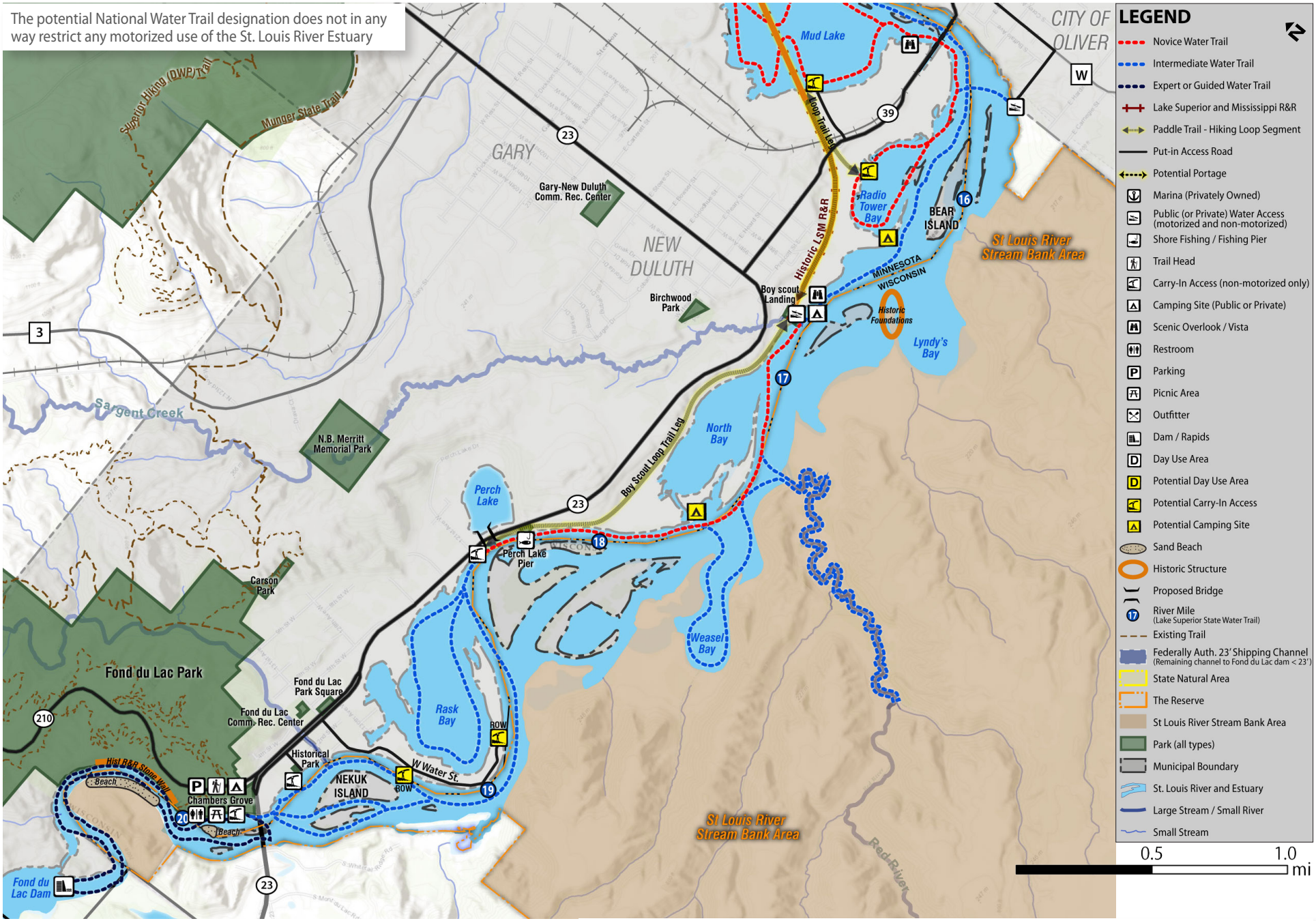


FIGURE 2.7 SECTION A - ST. LOUIS RIVER ESTUARY TRAILS AND FACILITIES

Potential improvements/ facilities on the Wisconsin side are proposed through this planning process; the viability of these proposals will be determined through a WIDNR property master planning process, consistent with Wisconsin laws.

The potential National Water Trail designation does not in any way restrict any motorized use of the St. Louis River Estuary

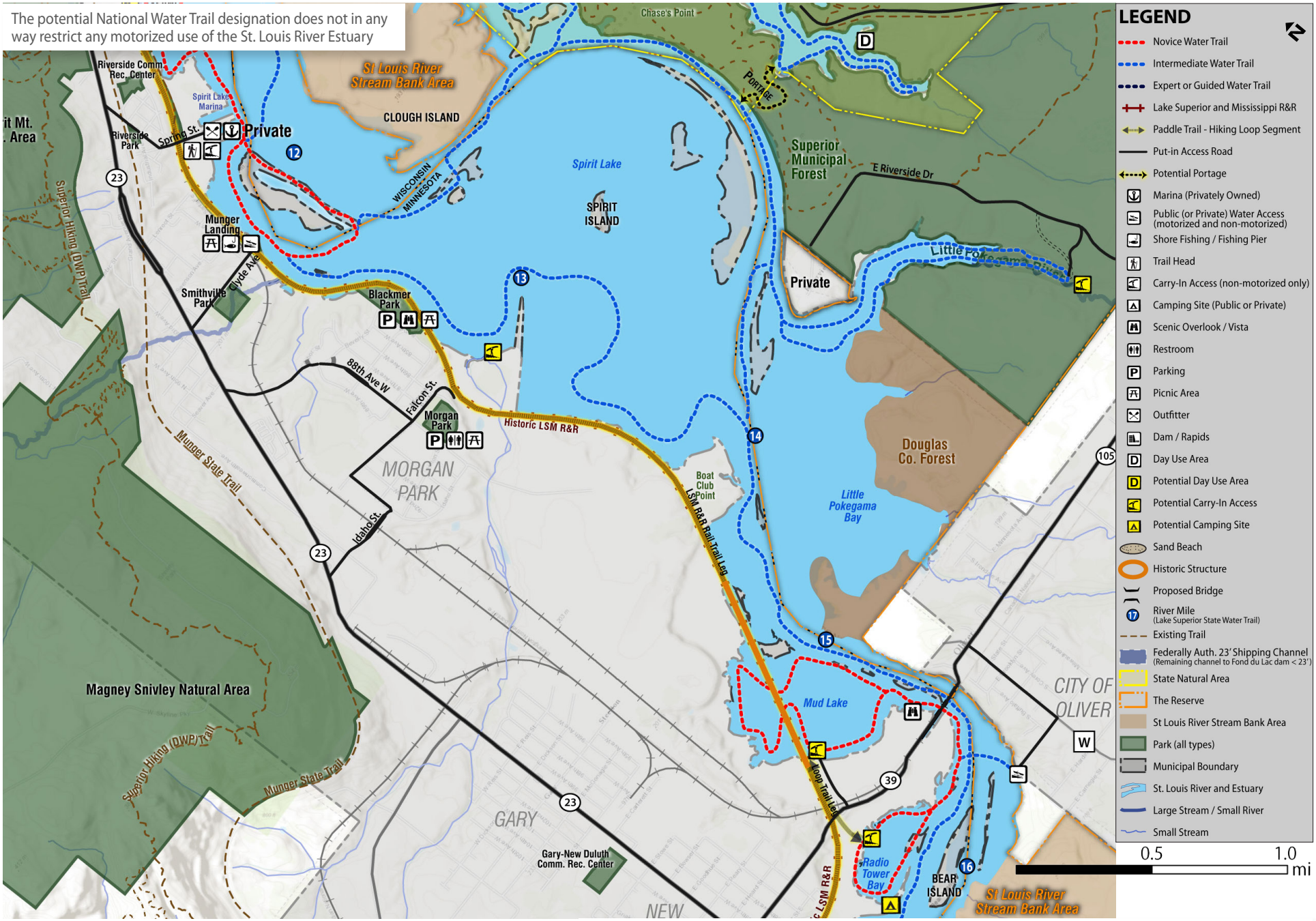


FIGURE 2.8 SECTION B - ST. LOUIS RIVER ESTUARY TRAILS AND FACILITIES

Potential improvements/ facilities on the Wisconsin side are proposed through this planning process; the viability of these proposals will be determined through a WIDNR property master planning process, consistent with Wisconsin laws.

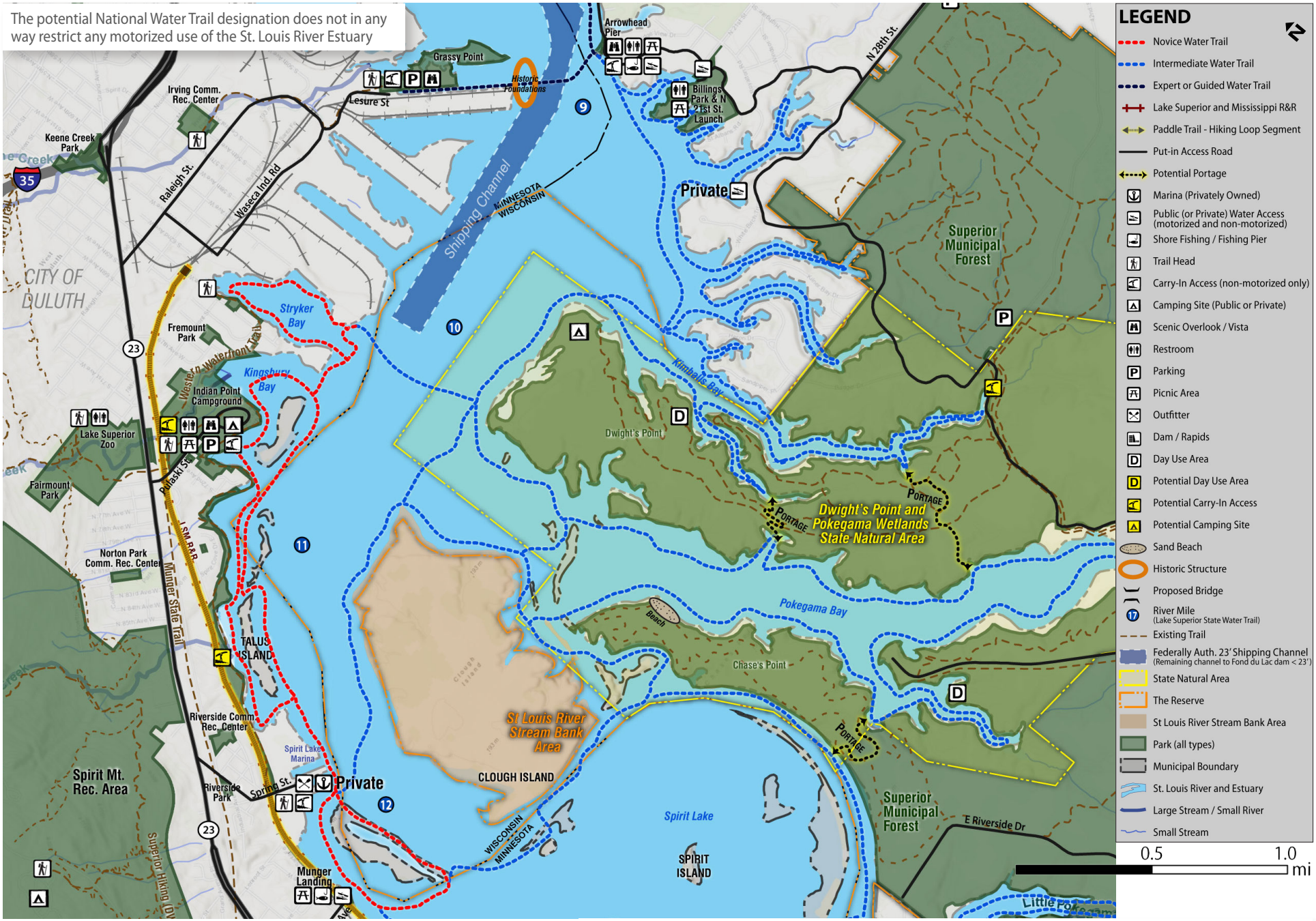


FIGURE 2.9 SECTION C - ST. LOUIS RIVER ESTUARY TRAILS AND FACILITIES

Potential improvements/ facilities on the Wisconsin side are proposed through this planning process; the viability of these proposals will be determined through a WIDNR property master planning process, consistent with Wisconsin laws.

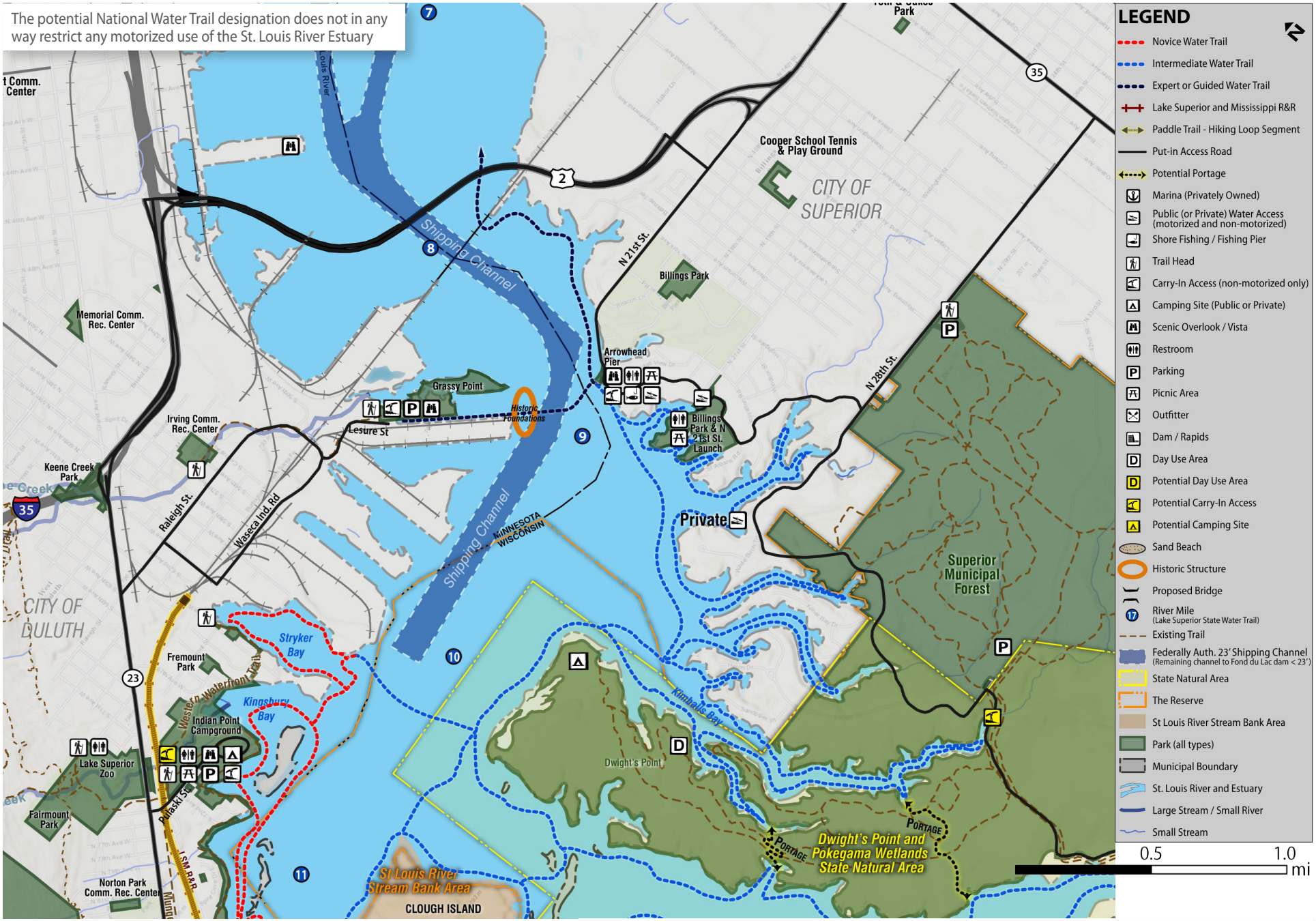


FIGURE 2.10 SECTION D - ST. LOUIS RIVER ESTUARY TRAILS AND FACILITIES

Potential improvements/ facilities on the Wisconsin side are proposed through this planning process; the viability of these proposals will be determined through a WIDNR property master planning process, consistent with Wisconsin laws.

The potential National Water Trail designation does not in any way restrict any motorized use of the St. Louis River Estuary

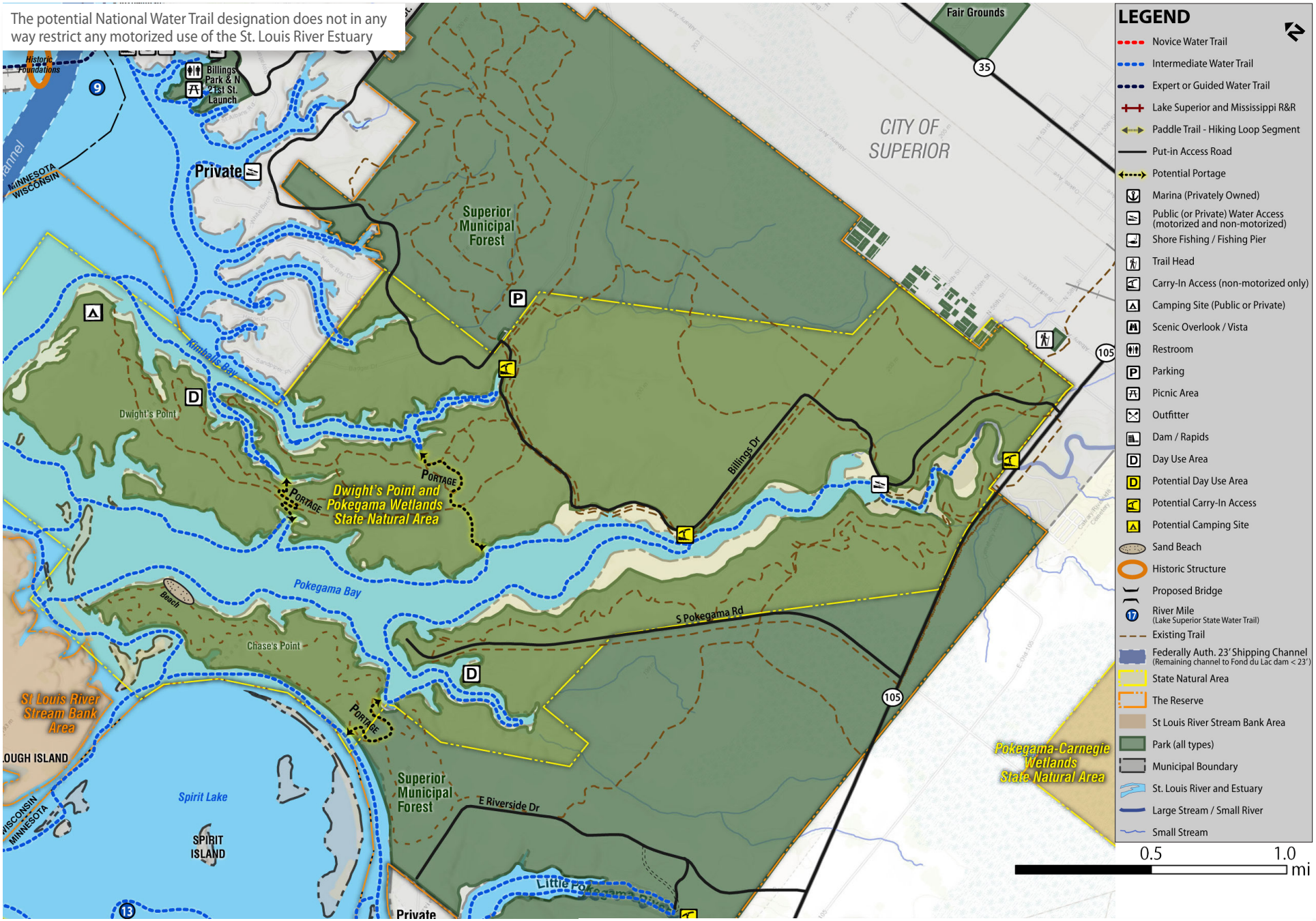


FIGURE 2.11 SECTION E - ST. LOUIS RIVER ESTUARY TRAILS AND FACILITIES

Potential improvements/ facilities on the Wisconsin side are proposed through this planning process; the viability of these proposals will be determined through a WIDNR property master planning process, consistent with Wisconsin laws.

Education Goals

#1- Provide a Range of Public Outreach and Educational Opportunities on the St. Louis River Estuary Water Trail

This educational goal consists of two major components. The first is the implementation of a public outreach information campaign, and the second is the creation of educational programs related to the river. Outreach programs are of key importance to the effective management of a national water trail. The public must learn that the trail exists, understand why it is important, and understand its benefits before they truly begin to use the Water Trail. A well-informed citizenry has the greatest likelihood of championing the trail and promoting it through word-of-mouth messages and publicity. Educational programs can also serve a public outreach function, creating champions who promote the river, but most importantly, educational programs can create stewards of the river and encourage people to value the river and use it responsibly.

Potential outreach examples include:

- Host an annual 2- or 3-day adventure river trip that features:
  - Camping
  - River education
  - Cooking and eating festive meals
  - Meeting local elected officials
  - Celebration of the river
  - Performance of a mini-stewardship project
- Promote the Leave-No-Trace campaign
- Programs that help remove or reduce barriers to participation for inexperienced paddlers
- Specialized programs targeting specific groups such as youth, families, active elderly and single adults
- Organize special events and programs such as races, canoe-a-thons, learn-to-paddle classes
- Create tie-ins between river activities and existing river-related local events
- Develop partnerships with outfitters, marinas, fishing groups, and boating associations

#2 - Develop and Maintain Strong Partnerships

The following lists include the key groups and organizations that have the knowledge or educational skills to provide assistance or leadership on the Water Trail's educational programs. Many of these groups were part of the Stakeholder Group and have offered a coordinated effort for educational programming along the Water Trail.

This report lists these groups according to three categories: Paddling and Boating Skills; Natural and Cultural History, and River Ecology. ***Although some of the groups listed below offer expertise in two or three of these categories, they are only listed once under the category that aligns with their primary focus.***

Paddling and Boating Skills

The Northland Paddlers Alliance is a good example of this category. The group provides advocacy, guidance, and education for the paddling community and is dedicated to expanding opportunities for human-powered watercraft in the Twin Ports and beyond. Through initiatives such as Paddle Duluth, the Northland Paddlers Alliance seeks to use paddle sports as a vehicle for increasing access, recreation, and education opportunities on the River Estuary.

The Duluth Experience and Day Tripper of Duluth, which provide guided tours of the River Estuary, are other examples of groups within this category.

- Cities of Duluth and Superior Park and Recreation Departments
- University of Minnesota - Duluth, Recreational Sports Outdoor Program
- University of Wisconsin - Superior, Campus Recreation - Outdoor Adventure
- College of St. Scholastica, Outdoor Pursuits
- Lake Superior College
- Superior Kayak and Outdoor Adventure Club
- Northland Paddler Alliance
- Day Tripper of Duluth
- The Duluth Experience
- Positive Energy Outdoors
- North Shore SUP
- Ski Hut
- Spirit Lake Marina & RV
- Courage Rehabilitation Center
- Outdoor Collaborative (YMCA)
- School Districts
- Valley Youth Center

Guided tours along the St. Louis River Estuary.

Natural & Cultural History

A unique example in this category is a potential partnership with the Lake Superior & Mississippi Railroad Co. (LSMRR). One idea discussed during

the planning process was to have local paddle clubs partner with the LSMRR, which would shuttle paddlers out to a put-in point. From this point paddlers would return over river along the rail line and back to their vehicles. The shuttle out journey could be an opportunity to provide narrative about the river and the railroad.

» Fond du Lac Tribal Community College
» Fond du Lac Band of Lake Superior Chippewa Museum
» Lake Superior & Mississippi Railroad Co. (historic excursion train line along the Water Trail)

River Ecology

Two notable examples in this category are the local Boy & Girl Scout organizations, who conduct excursions in which members alternate hiking and paddling along the River Estuary from the Perch Lake put-in to Boy Scout Landing.

» St. Louis River Alliance
» Lake Superior National Estuarine Research Reserve (NERR)
» Duluth Audubon Society
» Sierra Club
» Hartley Nature Center
» Wilderness Inquiry, Minneapolis
» Girl Scouts and Boy Scouts

The Lake Superior & Mississippi Railroad Co. provides excursion train rides along the St. Louis River Estuary on the historic first rail line to the City of Duluth (photo from LSMRR website)

#3 - Promote a Coexistence Between Motorized Boaters and Paddlers

Motorized boat users of the River Estuary also need to be included in educational efforts on the Water Trail. In addition to awareness of the trail and its history and ecology, the following messages in particular should be communicated to the motor boating community regarding a future National Water Trail designation:

» The Cities of Duluth and Superior do not support, and will not support, any reduction in the current freedom of motorized boaters to access and use the River Estuary.
» The potential National Water Trail designation does not in any way require local governments to restrict motorized use of the River Estuary.
» The potential to increase the number of paddlers on the river will only increase the number and diversity of citizens supporting the long-standing work of sportsmen and motorized boaters to ensure that the river will always be a great place to fish, boat, and recreate.

The Duluth Experience provides guided tours of the St. Louis River Estuary (photo the Duluth Experience website)

A collection of some of the partners for the St. Louis River Estuary Water Trail.

Restoration and Conservation Goals

#1 - Continue to Promote and Support On-Going Restoration Efforts in the St. Louis River Estuary.

Several restoration projects and conservation measures have already been taken, are currently underway, or are planned for the future (Figure 2.12). The following is a summary of the major restoration projects and conservation activities in the River Estuary:

Areas of Concern

The St. Louis River was designated as one of 43 Areas of Concern (AOC) on the Great Lakes due to significant issues with pollution and degraded habitat. AOCs are places that have been polluted through past common practices of dumping untreated waste on land and in waterways. Contamination has been found at several sites along the river, including the Interlake and U.S. Steel Superfund sites and the Newton Creek and Hog Island Inlet. Landfill sites and other point-source dischargers along the river have also contributed to the contamination (See map on page 45).

Beneficial Use Impairments (BUIs)

When the St. Louis River was designated an AOC, the following environmental impairments were identified:

- Restrictions on fish and wildlife consumption
- Excessive loading of sediment and nutrients
- Degradation of fish and wildlife populations
- Beach closings
- Fish tumors or other deformities
- Degradation of aesthetics - Removed 2014
- Degradation of benthos
- Loss of fish and wildlife habitat
- Delisting targets

These nine Beneficial Use Impairments need to be addressed before the St. Louis River can be "delisted" as an Area of Concern.

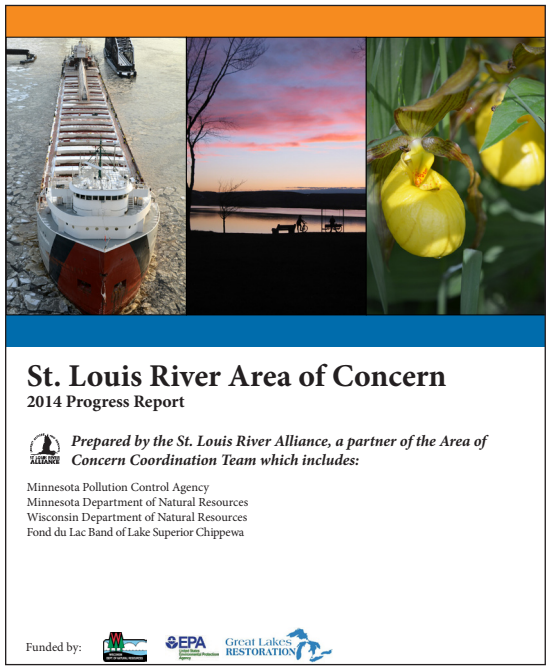
Efforts Towards Restoration

These problems are being addressed by the St. Louis River System Remedial Action Plan (RAP), which focuses primarily on the last 39 miles of the St. Louis River from below Cloquet, Minnesota to its mouth on Lake Superior. The RAP process for the St. Louis River began in 1989 as a combined effort between the Minnesota Pollution Control Agency and the Wisconsin Department of Natural Resources. At that time, the agencies created a citizens advisory committee, now known as the St. Louis River Alliance (SLRA). The SLRA operates as a local nonprofit organization and works to oversee activities and practices to restore, protect and enhance the St. Louis River.

St. Louis River AOC stakeholders have made significant progress towards restoring the beneficial uses of the river. Local, state, tribal, and federal agencies are working in partnership to clean up and restore the St. Louis River and move it from an "Area of Concern" to an "Area of Recovery". Construction is complete on sediment remediation and habitat restoration projects. Control of historical point source discharges is in place, including the Duluth waste water treatment plant.

Other accomplishments include:

- The 2013 Roadmap to Delisting shows the remaining management actions needed to remove remaining BUIs and delist the AOC.

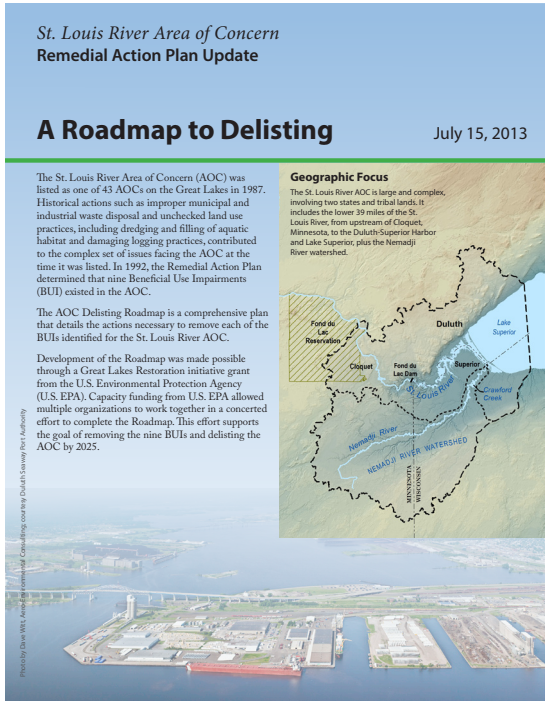


St. Louis River Area of Concern
2014 Progress Report

Prepared by the St. Louis River Alliance, a partner of the Area of Concern Coordination Team which includes:

Minnesota Pollution Control Agency
Minnesota Department of Natural Resources
Wisconsin Department of Natural Resources
Fond du Lac Band of Lake Superior Chippewa

Funded by:



St. Louis River Area of Concern
Remedial Action Plan Update

A Roadmap to Delisting

July 15, 2013

The St. Louis River Area of Concern (AOC) was listed as one of 43 AOCs on the Great Lakes in 1987. Historical actions such as improper municipal and industrial waste disposal and unchecked land use practices, including dredging and filling of aquatic habitat and damaging logging practices, contributed to the complex set of issues facing the AOC at the time it was listed. In 1992, the Remedial Action Plan determined that nine Beneficial Use Impairments (BUI) existed in the AOC.

The AOC Delisting Roadmap is a comprehensive plan that details the actions necessary to remove each of the BUIs identified for the St. Louis River AOC.

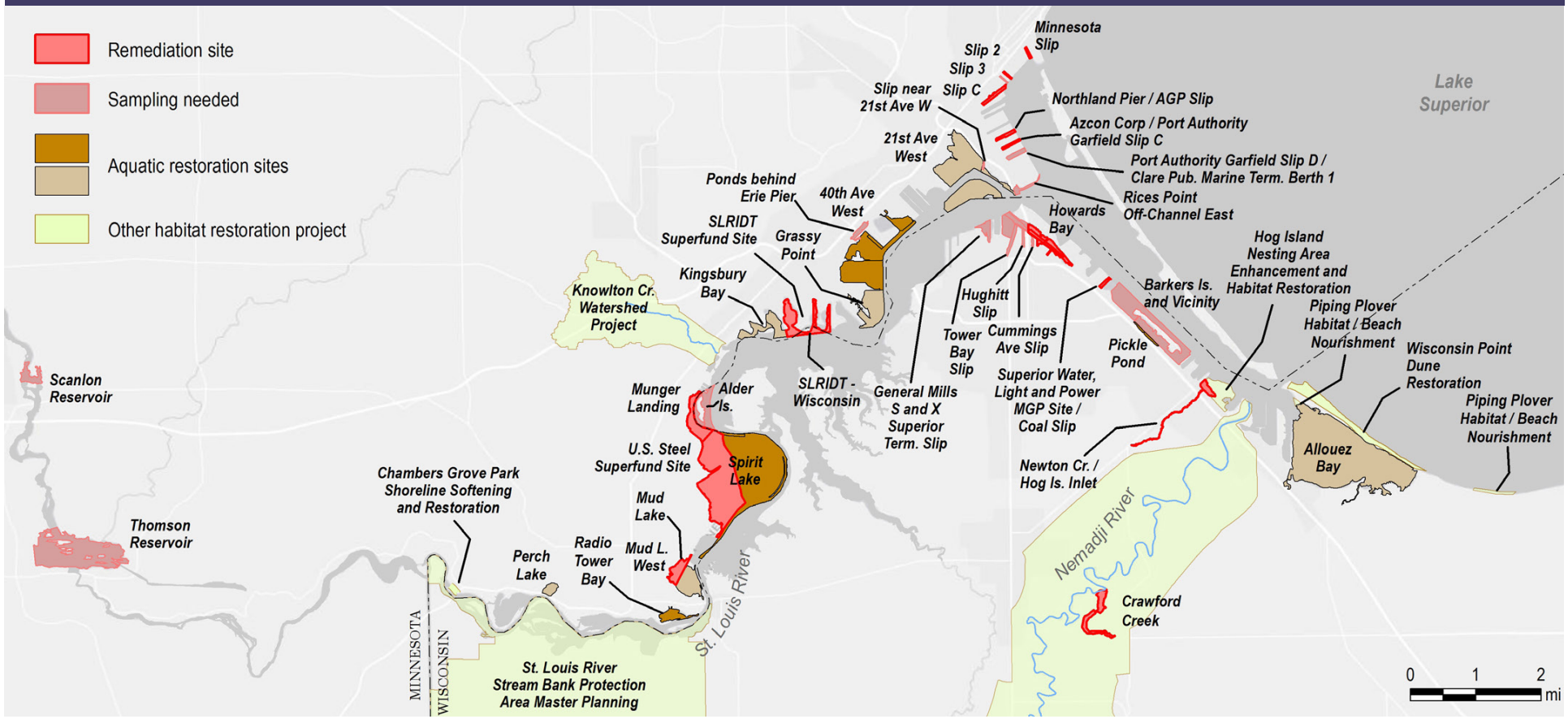
Development of the Roadmap was made possible through a Great Lakes Restoration initiative grant from the U.S. Environmental Protection Agency (U.S. EPA). Capacity funding from U.S. EPA allowed multiple organizations to work together in a concerted effort to complete the Roadmap. This effort supports the goal of removing the nine BUIs and delisting the AOC by 2025.

Geographic Focus

The St. Louis River AOC is large and complex, involving two states and tribal lands. It includes the lower 39 miles of the St. Louis River, from upstream of Cloquet, Minnesota, to the Duluth-Superior Harbor and Lake Superior, plus the Nemadji River watershed.

FIGURE 2.12 RESTORATION AND CONSERVATION ACTIVITIES MAP

Remediation and Restoration Sites in the St. Louis River AOC



- Removal of the Degradation of Aesthetics BUI in August 2014 was the first BUI removed in the St. Louis River AOC.
- A progress report published by the St. Louis River Alliance in 2013 outlined several achievements that have been made in the AOC and also detailed upcoming projects that will be implemented to help delist the AOC.
- The first natural reproduction of lake sturgeon was observed in 2011. A continuation of this phenomenon is an important step in removing the degradation of fish and wildlife populations' impairment.
- Remedial efforts at the St. Louis Interlake Duluth Tar Superfund site were completed in 2011. The site was cleaned up as three separate Operable Units. Cleanup and restoration efforts have significantly reduced the contamination and potential for future pollution in the St. Louis River.
- Erie Pier was converted to a reuse and recycling facility in 2007. The site formerly functioned as a confined disposal facility. Conversion will improve Erie's long-term capacity for managing dredged material.
- The Lower St. Louis River Habitat Plan was completed in 2002. The Citizen's Action Committee worked with several partners from city, county, state, and federal agencies on this document. The plan has been used extensively by resource management agencies and local communities for several years.

Milestones:

- 2014: Knowlton Creek Habitat Restoration Project Construction Start
- 2013: Progress report published by the St. Louis River Alliance
- 2012: RAP Update published by the Wisconsin Department of Natural Resources
- 2011: Stage II RAP Update published by the Wisconsin Department of Natural Resources
- 2011: A more thorough report of delisting targets was published as the St. Louis Area of Concern Complete Delisting Targets
- 2008: The St. Louis River AOC Delisting Targets document was published by the Minnesota Pollution Control Agency
- 2004: The Citizen's Action Committee proposed restoration goals for many of the impaired uses through a citizen process and submitted them to the Wisconsin Department of Natural Resources and the Minnesota Pollution Control Agency.

For more information, visit the EPA's website project page: http://www.epa.gov/greatlakes/aoc/stlouis/

Lake Superior National Estuarine Research Reserve (The Reserve)

The Lake Superior National Estuarine Research Reserve is one of 28 areas across the country designated for long-term research on coastal resources and the human populations those resources support. The Lake Superior National Estuarine Research Reserve is located at the confluence of the St. Louis River and Lake Superior, the largest and most pristine of the Great Lakes. The Reserve works in partnership to improve the understanding of Lake Superior freshwater estuaries and coastal resources and to address the issues affecting them through an integrated program of research, education, outreach, and stewardship. The Reserve is comprised exclusively of public lands and waters and contains approximately 16,000 acres of representative terrestrial and aquatic habitats, including:

- Riparian and riverine habitat
- Riverine islands
- Emergent freshwater marshes, interdunal wetlands and scrub swamp
- Aspen, dry and hardwood forests
- Open sand beach and dunes

The Reserve land-owner partners are Wisconsin Department of Natural Resources, City of Superior, Douglas County and the University of Wisconsin. Several other partnering agencies from Minnesota, Wisconsin, and the Fond du Lac Band of the Lake Superior Chippewa also sit on our Reserve Advisory Board.

Lake Superior National Estuarine Research Reserve

On-going research stations are built in The Reserve

WIDNR - St. Louis River Stream Bank Area

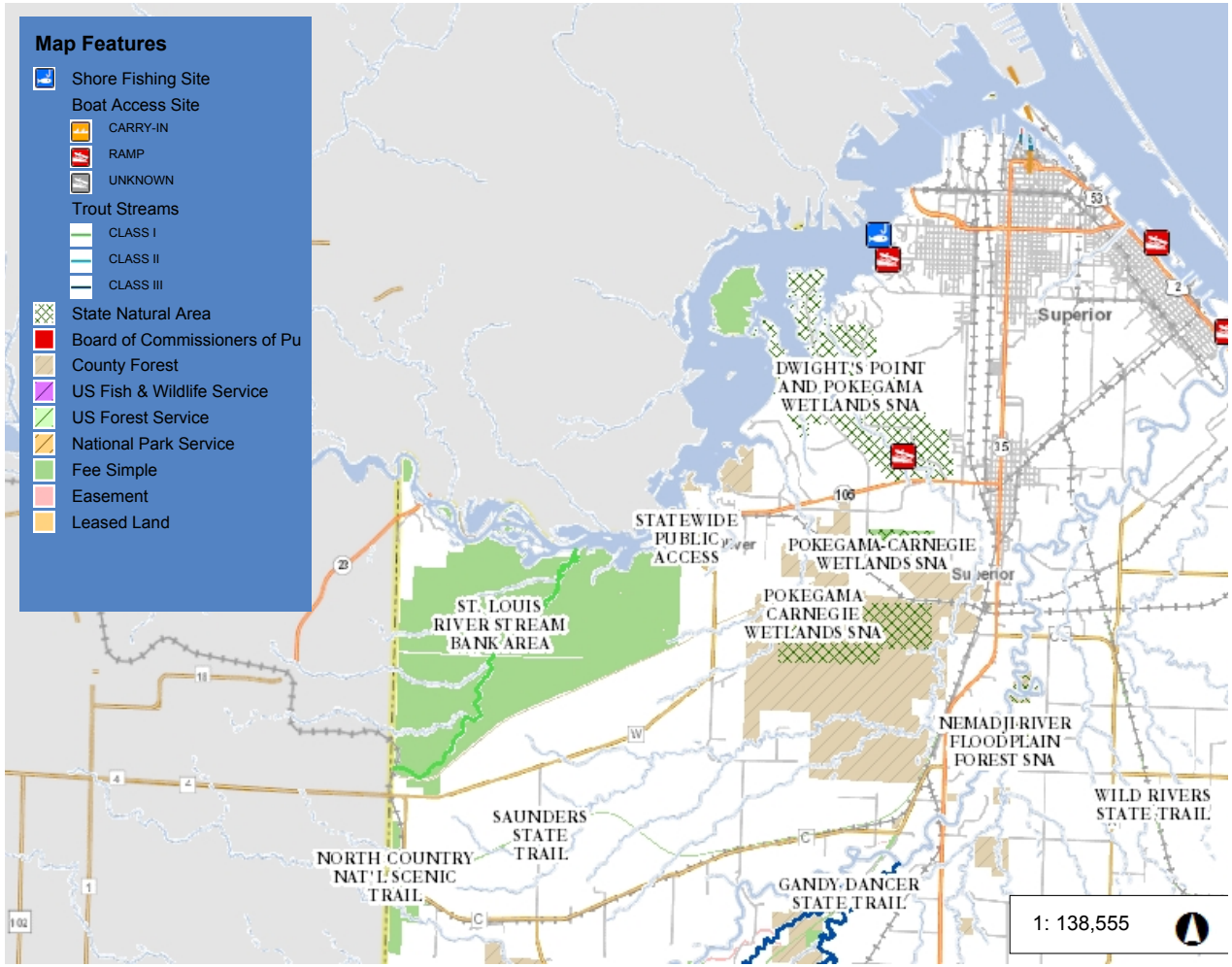
The 7,000-acre St. Louis River Stream Bank Area was approved in 1994 (Figure 2.13). It is characterized by steep dendritic ravines that flow into the Red River or directly into the St. Louis River. More level areas exist between the ravines and are heavily wooded. Marshy areas may make travel difficult at times. The protection area encompasses 18 stream miles and 8 state-owned islands. This area also includes Clough Island and a small area of land directly downstream from the dam.

The Red River gets its name from the red clay soils in the area. The St. Louis River Stream Bank Area lands were purchased in order to prevent uses in these locations that would contribute to silt erosion flowing into the river system.

WIDNR / City of Superior - Dwight's Point and Pokegama Wetlands State Natural Area (SNA)

Dwight's Point and Pokegama Wetlands is owned by the City of Superior and designated a State Natural Area in 1994. The natural area borders the River Estuary, which bisects the uplands into a series of narrow, steep-sided ridges, the largest of which is Dwight's Point. Extensive deep and shallow marshes border the Pokegama River. Since this is a non-DNR owned SNA, opportunities for hunting and trapping are regulated by the City of Superior.

FIGURE 2.13 ST. LOUIS RIVER STREAM BANK AREA



The Radio Tower Bay Marine Debris Removal Project restored the shallow bay on the St. Louis River Estuary with wild rice habitat. The project was completed in 2015 (above and below images).

Chambers Grove Park recently completed a shoreline restoration project removing a failing sheet pile wall and restoring a natural shoreline to the park (photo by Duluth News Tribune)

TABLE 2.2 - RESTORATION PROJECTS/ CONSERVATION AREAS IN THE ST. LOUIS RIVER ESTUARY

Project/Activity	Completed/ Existing	Active/ Ongoing	Proposed
Radio Tower Bay Marine Debris Removal Project and Restoration	■		
Dwight's Point and Pokegama Wetlands State Natural Area	■		
Clough Island - St. Louis River Estuary Stewardship Grant Acquisition (2010-2011)	■		
Lake Superior National Estuarine Research Reserve (Designated in 2010, 16,697 acres, University of Wisconsin Cooperative Extension)	■		
Magney Snively Natural Area	■		
Jay Cooke State Park	■	■	
Area of Concern (AOC) Remediation		■	
US Steel Site & River Restoration		■	
Chambers Grove Park and Shoreline Restoration	■		
Kingsbury Bay Restoration		■	
Grassy Point Restoration		■	
Wild Rice Restoration (various locations)		■	
Historical Park Shoreline Restoration			■

Key Features:

- Restore habitat according to the 2012 Conceptual Design Plan: Grassy Point Project, St. Louis River Area of Concern (MN Pollution Control Agency, US Environmental Protection Agency, and Great Lakes Restoration, including:
  - » Open water habitats and littoral zone improvements.
  - » Creek channel improvement and wetland reconnection.
  - » Open marsh restoration and upland habitat improvement.
- Repair boardwalk and overlook structure.
- Add interpretive storytelling of paper mills and sunken barge history.
- Add bird blinds for wildlife viewing.
- Improve wayfinding to site and to canoe/kayak access.
- Maintain winter trails.

Grassy Point will be undergoing an environmental clean-up project spearheaded by the MNDNR to remove wood waste from a former lumber mill on site.

Key Features:

- Incorporate conclusions/recommendations for the area from the Archeological Phase I Survey for the Historical Park prepared by the Duluth Archeological Center.
  - » Further investigate identified archeological features before disturbing park grounds.
  - » Expand story telling of Fond du Lac history with informational signage.
- Retain existing historical interpretation area.
- Address erosion along the river by adding 3 rock outcrop areas for fishing/river viewing and working with partners to stabilize banks.
- Add canoe/kayak launch.
- Formalize natural surface trail through existing floodplain forest.
- Make improvements to 133rd Ave W in collaboration with street reconstruction and Public Works
  - » Formalize turnaround/dropoff area for canoe/kayak loading.
  - » Create waterfront picnic area at southern terminus of 133rd Ave.
  - » Create formalized parking spaces (6+/-).
  - » Repair sidewalks along 133rd Ave.

Historical Park (near Chambers Grove Park in the Fond Du Lac Neighborhood of Duluth) has undergone a master plan to include a naturalized shoreline restoration and exotic species removal, along with an upgraded canoe/kayak launch.

Community Support Goals

From the support of the general public and numerous existing river user groups to local and state governments and other St. Louis River Estuary managing agencies, the community has demonstrated strong support for the Water Trail project. The following section outlines how the array of various support/partner groups could lend their assistance and resources in meeting the goals of this Master Plan. This section is organized around five main categories:

» 1) General public;
» 2) Local governments and agencies;
» 3) State agencies;
» 4) Visitor and tourism bureaus; and
» 5) River user groups.

#1 - Continue Outreach and Education to the General Public and Motorized Boating Community to Maintain Ongoing Support for the St. Louis River Estuary Water Trail

There has been a strong desire and growing community demand to grow and expand paddling opportunities in the Twin Ports area, particularly in the Estuary. Throughout the master planning process public support was expressed at a number of touch points with the community on both the Minnesota and Wisconsin sides of the river. Two community meetings/open houses were conducted to gather feedback and input on the Master Plan. The draft Master Plan document was posted on-line for public review and comment. Additionally, specific meetings were conducted with river user group stakeholders from both the paddling and the motorized boating communities to clarify any misconceptions and educate each user group about one another.

For example, the Duluth Sail and Power Squadron organization will likely continue to assume, as it currently does, a major role in river safety, boating education and navigation policies should the Estuary be designated a National Water Trail. They have the history and resources to play a pivotal role in helping educate motor boaters and paddlers alike as to the do's and don'ts on the Estuary. Common questions expressed by the motorized boating community have been asked on other nationally designated water trail rivers about paddlers understanding of navigational rules while on the water, usage or congestion at boat launches and awareness of other river recreation activities such as duck hunting and fishing tournaments that happen seasonally. Education and outreach for both the motorized and non-motorized river users is an important aspect to successfully managing a National Water Trail.

Water navigation rules and suggested forms of ethical behavior addressing all these questions of concern do exist. They address rules and appropriate behavior for both the boater and the paddler. On other rivers these rules are sometimes only loosely followed and enforced. However, as boater and paddler traffic increases, better education of both boaters and paddlers becomes necessary. In the case of this Water Trail, the Duluth Power Squadron and Northland Paddlers Association together could assume a pivotal role in educating river users on how to share the riverway by avoiding the 'don'ts' and following the 'do's'. This kind of 'Share-The-Way ' education campaign has been found to reduce the need for more restrictive laws and issuance of fines to violators.

#2 - Continue Support from Local Government and Agency Site Managers

City of Duluth

The City of Duluth Parks & Recreation Department currently maintains a number of park properties abutting the Estuary. With recent investments through the St. Louis River Corridor initiative, the City of Duluth is anticipating capital investments in the following facilities:

» Chambers Grove Park - 2016/2017
  - New canoe/kayak launch, upgraded parking lot, restrooms and picnic shelter, kiosk and signage, and naturalized shoreline (in partnership with the Minnesota Land Trust)

» Historical Park - 2017+
  - Designated put-in, upgraded parking, kiosk, picnic area and naturalized shoreline

» Improve River Access Network - 2017+
  - Providing a substantial capital investment for new river access network to include primary and secondary river access points.

» Western Waterfront Trail Planning
  - A current planning process to explore the extension of a popular natural surface trail along the Estuary. This planning process has reinforced the need for upgrades to existing access points at Perch Lake and the creation of dedicated non-motorized launches at existing public water access spots including Clyde Avenue Launch (Munger Landing) and Boy Scout Landing.

» Slag Point - 2018 +
  - As part of the US Steel site remediation, a designated non-motorized put-in is planned for this area

Arrowhead Fishing Pier and Boat Launch in Superior has recently undergone a renovation and is being maintained by the City of Superior (project partners listed above, new launch facility below)

Billings Park / 21st Street Launch is owned and managed by the City of Superior, WI

City of Superior

The City of Superior Parks, Recreation and Forestry Department operates and manages city parks, boat launches, trails and other recreation areas for the City of Superior. The Parks, Recreation and Forestry Department should continue to provide boat launch permit services (either a daily or annual pass is required for both motorized and non-motorized water craft). The City should also:

» Continue to operate/maintain both the Arrowhead Fishing Pier and Boat Launch, the Billings Park/ 21st Street public launches, and the public access south of Billings Drive in Pokegama Bay.

» Continue to manage/maintain the Dwight's Point and Pokegama Wetlands State Natural Area.

» Integrate goals of the Master Plan into future planning for the Superior Municipal Forest (in partnership with the WIDNR and the Dwight's Point and Pokegama Wetlands State Natural Area) for future put-in sites, rest areas, portages, etc.

#3 - Maintain Existing State Level Support

Minnesota Department of Natural Resources

» Continue to operate/maintain Boy Scout Landing & Clyde Avenue (Munger) Landing

» Assist with data for mapping purposes

Wisconsin Department of Natural Resources

» Continue to operate/maintain the Statewide Public Access in the off of Detroit Street in the Town of Oliver

» Continue to manage/maintain the St. Louis River Stream Bank Area

Multi-Jurisdictional Support

Some of the river accesses and river usage areas are maintained by multiple land/river managers from different local and state governmental units. It is anticipated these units would continue to work in cooperation with each other.

An approach for the future water trail management organization may be to target annual meetings between the overlapping jurisdictions to discuss and determine capital and annual maintenance responsibilities and to coordinate with key river user groups.

Oliver Landing in the Town of Oliver is currently operated and maintained by the WIDNR

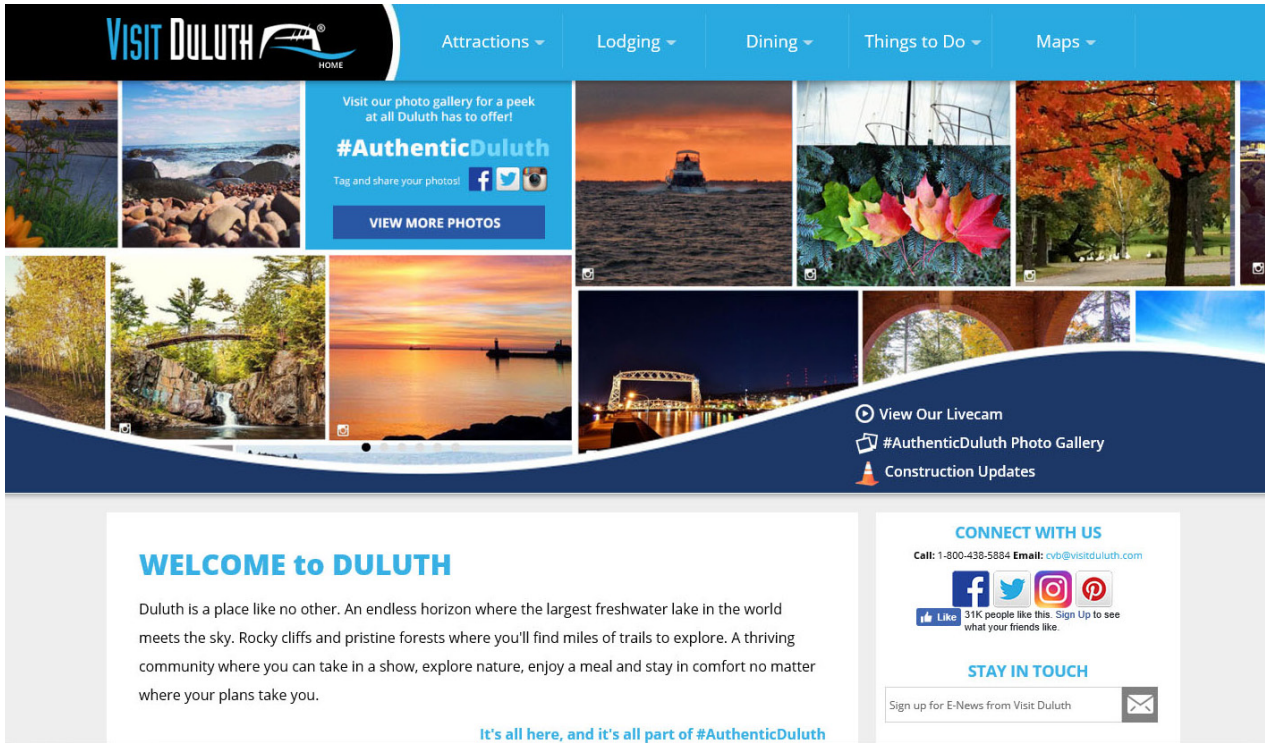
#4 - Integrate Support from the Visitor Bureaus

Both the Superior-Douglas County Area Chamber and Visitor Bureau and Visit Duluth were involved as part of the Leadership Team during the planning process. Both groups recognize the benefits of a National Water Trail designation for the St. Louis River Estuary Water Trail and see this as another marquee draw for outdoor recreational tourism in the Twin Ports region.

Both groups have expressed interest in promoting the Water Trail and assisting in disseminating key information on the Water Trail. Currently, discussions are underway with Visit Duluth to create an integrated marketing campaign to showcase the broad range of outdoor adventure activities in the Duluth/Superior region, with particular focus on the St. Louis River Corridor in West Duluth.

As the Water Trail begins to take shape, both the Superior-Douglas County Area Chamber and Visitor Bureau and Visit Duluth can play a key role in:

- Hosting or providing a direct link to a water trail web-site.
- Providing summary information on print material.
- Coordinate an annual or semi-annual review and an update of information with the Water Trail management group.
- Focus on promotion and advertising for the Water Trail and support facilities such as lodging, outfitters, food and beverage, and other related outdoor adventure/recreation activities.



Visit Duluth and the Superior-Douglas County Area Chamber and Visitor Bureau can assist with promotion of the Water Trail, identification of support services, and additional outdoor recreation opportunities to extend the stay for water trail users

#5 - Continue to Leverage Existing River User Group Support

River user groups played a key role in the master planning process. As vested stakeholders, the collection of river user groups provided valuable insights into desired routes and public awareness strategies and showed willingness to work with local governments and agencies to implement the Master Plan. These groups also expressed their continued support for the organization of the proposed water trail management and on-going maintenance effort.

As identified in previous sections of the Master Plan, numerous groups are already actively serving as outfitters, providing rentals, conducting on-the-water classes, and providing tours of the River Estuary. Many of the user groups identified in the acknowledgements and further articulated on pages 42-43 should overlap key support categories including:

» **1) Recreational Focus:** groups such as the Northland Paddlers Alliance, The Duluth Experience, Day Tripper of Duluth, North Shore SUP, Power Sail and Power Squadron, Twin Ports Walleye Association, etc.

» **2) Environmental/ Ecology Focus:** groups such as UMD, and the Audubon Society, etc.

» **3) Historical/Cultural Focus:** groups including the St. Louis River Alliance and the Fond Du Lac Band of Lake Superior Chippewa

» **4) Tourism Bureaus/ Chambers of Commerce:** groups include Visit Duluth and the Superior-Douglas County Area Chamber and Visitor Bureau

As the Water Trail evolves these groups will play an active role that includes:

- Assist with annual operation needs
- Supply staffing for leadership & annual operation maintenance tasks as local government managers typically do not have the staffing or necessary funds
- Provide organization for key events
- On-going coordination with local management agencies

Actively Seek Letters of Support

During the master planning process representatives from each of the supporter/ partners identified previously were asked to submit a letter of support for the Water Trail, and a significant number of the representatives have agreed to submit letters of support for the project. These letters of support will be included in the National Parks Service (NPS) National Water Trail Application Document, which will be completed and submitted to the NPS after stakeholder and local government review and approval of this Master Plan.

Public Information Dissemination Goals

The following section outlines specific goals for creating a brand for the Water Trail and spreading the word about the Water Trail through on-line and print media.

#1 - Utilize Technology for Public Information Dissemination

Seventy percent of outdoor consumers use technology for something outdoor related, and many of those use it to make their outdoor experiences even more social. Those who use smartphones in the outdoors use them to stay in touch, and those who use social media platforms do so to share their outdoor experiences with others. Digital streaming platforms are most often used to find inspiration or learn about a new outdoor activity, and search engines help to seek out and find new places to engage.

#2 - Create a Logo and Slogan

A St. Louis River Estuary Water Trail logo should be developed to help establish a brand for the Water Trail. This logo would be used in all promotional materials, social media networks, and on all directional and river signage. The purpose of the logo is to link all public information and signage to the Water Trail so that it is easily recognizable. The logo design should include some component that depicts the uniqueness of the Water Trail. As an example, the logo could depict an image of a freshwater estuary as there are currently no freshwater river estuaries that are National Water Trails. Other possible logo components could include elements of nature, scenic beauty and/or historic elements. To further the logo's promotional message, a slogan could be used in conjunction with the logo.

Bayou Teche
PADDLE TRAIL
Le Sentier Nautique du Bayou Teche

Examples of existing National Water Trail logos

#3 - Create and Manage a St. Louis River Estuary Water Trail Website

A simple, attractive website should be developed for the Water Trail with a domain that is easily identifiable with the Water Trail. The initial host of the website could be a local visitor bureau, such as Visit Duluth, which would often have the expertise to develop the website and can link to other forms of recreation, lodging, and support services. Equally important, visitor bureaus can garner considerable contact information on both local and out-of-town river users, giving the visitor bureau a set of contacts that they might not otherwise acquire. Management of the website and social media sites could change hands. For example, as the Water Trail evolves into a 501(c)(3), its executive director could consider taking over hosting this website and its related social media, but should still be linked to the broader visitor bureaus. The Water Trail website should provide the following information:

» **General Information:** This page would include information about travelling the various sections and routes within the river estuary. A large comprehensive map would display the entire estuary, providing a broad view of the entire Water Trail. As articulated in this Master Plan, there should be descriptive narratives describing related trail features and points-of-interest as well as narrative descriptions and lists on trip-planning. Information about river natural areas and restoration efforts should also be included. Equally important, historical and cultural information would be provided along with embedded links within the narrative for each of these topics areas, allowing the reader to acquire more in-depth information.

» **Link to NPS Water Trails System Home Page:** An important element to tie the Water Trail website is to have a direct tie to the National Parks Service National Water Trails System home page. Here visitors will find information about the National Water Trail System, review frequently asked questions and search for other nationally designated water trails.

» **Maps:** Besides the comprehensive map, sectional maps could include all the information necessary to easily navigate and locate points-of-interests on each of the respective travel routes. Each map would include all the common water trail information as seen on the maps on pages 36-41 of this Master Plan. The backs of the maps would include Rules of travel, Leave-No-Trace instructions and brief descriptions of points-of-interest. As the Water Trail's management and its funds evolve, other more sophisticated mapping components could be implemented. For example, all digital maps would include Pop-Up windows that can provide photos of and descriptive information on particular locations or points-of-interest. For smart phone users a QR code would be provided on this page for each of the maps to allow the user to instantly download the map to their phone. The phone then acts as a GPS device, guiding them along their river trip and allowing the user to be able to identify their exact location at any point of the trip.

» **About the St. Louis River Estuary Water Trail:** This page would include an informative message describing: 1) The management and related agencies who are responsible for the river; 2) What the management does to improve services and protect river resources; 3) How it coordinates with all the agencies and organization who have either authority or interest in the river.

» **Events:** This page would include a listing of all river-related events with topic areas such as: clean-up days, race events, fishing tournaments, boating/paddling instruction/safety, historical tours, nature tours, photo classes, etc. Links to other websites should be included. The common websites would be those hosting the event and website of any organization that has an interest in the site. This page would describe all events hosted by the Water Trail's management organization.

» **River-Related Services:** This page would include services provided by other businesses and agencies and a link would be provided to their websites and social media sites. The types of businesses and agencies could include: boat rentals, paddle sports rentals, marinas, shuttle

TABLE 2.3 - WEBSITE STRUCTURE

Page Number & Name	Explanation
1. Home-Water trails	Introductory paragraph about the river, the mission and goals of the Water Trail as well as a promotional message encouraging the reader to visit the river
2. Map-all rivers	Click on Links to individual river maps
3. Map-each river	Click on Pop-up windows—see below
4. Trip Planning	Boat Rentals, Shuttle methods,
5. Points-of-Interest	Historical, Geological, etc.
6. Social Media	Paddlers post text, photos, interesting river experiences, etc.
7. Links	Boat Rental/Liveries; Shuttle services; regulations-fish, hunt, paddling; lodging, hospitality,
8. Events	Events related to paddling, boating, nature, natural history, fishing, hunting …

TABLE 2.4 - WEBSITE MAP POP-UPS

Map Pop-ups	Items Included in Pop-up
Access/Take-out	Directions to, fees, photo
Point-of-Interest	Text, photo
Dams	Name, Portage direction
Rapids	Directions on how to shoot them
Campsites	Text—type and # of sites
Boat Rentals	Text—type of boats, shuttle explanation
River Sponsors	Outfitters, River Alliance, DNR, City, lodging

services, sporting goods/fishing/hunting/ paddle sports stores, DNR regulations/river information, visitor bureau (with restaurant/ lodging), guiding, tour services, instructional services, museums, etc.

» **What's New:** Management can share the latest current events taking place related to the Water Trail and the River Estuary.

» **Blogs:** This page would include articles and photos posted by the Water Trail's management organization as well as river enthusiasts. The topics would include those things deemed most interesting for river enthusiasts. The articles should help stimulate more interest and enjoyment related to the river estuary.

» **River Enthusiasts Messages/Opinions:** This page is a place for river users and enthusiasts to express their thoughts and feelings on the Water Trail and share their experiences with fellow river enthusiasts. They can also share their opinions and suggestions with Water Trail management. The management can use this page as a way to stay connected with the river enthusiasts and keep abreast of the latest thoughts and feelings from Water Trail users.

» **Links:** This page displays links related to other sites that address things like river management, regulations, preservation, and various forms of outdoor recreation.

#4 - Create and Distribute Printed Maps

Printed maps need to include information for river users so they can properly navigate the river estuary and locate relevant locations along the river estuary Thus, the maps should minimally include the following:

» Information:
- Name, Logo & Contact phone #
- Website address & social media outlets
- Safety guidelines
- River usage regulations (including fishing, hunting, trapping)
- Leave-no-trace guidelines
- City/Town names & major roads

» River Navigation/Use
- River miles
- River access, landings & carry-in sites
- Rest stops/portages
- Restroom facilities
- Drinking water
- Campsites, camping regulations & fire usage
- Contour/elevations

» Support Facilities
- Shuttle service contacts
- Rental services

» Points of Interest
- Historical, cultural, geological, and natural history sites

» Hazards:
- Dams/bridges
- Power lines/pipe lines

The easiest maps to construct and disseminate are PDF maps. These can be disseminated as hard copy maps and/or digitally downloaded and printed. Pages 56-61 provide examples of the existing, adjacent State Water Trails including the St. Louis River Water Trail, The Lake Superior Water Trail (North Shore - Minnesota and South Shore - Wisconsin).

Mobile device supported navigational maps could be developed to enhance the Water Trail experience and provide another means of wayfinding.

Interactive Mapping

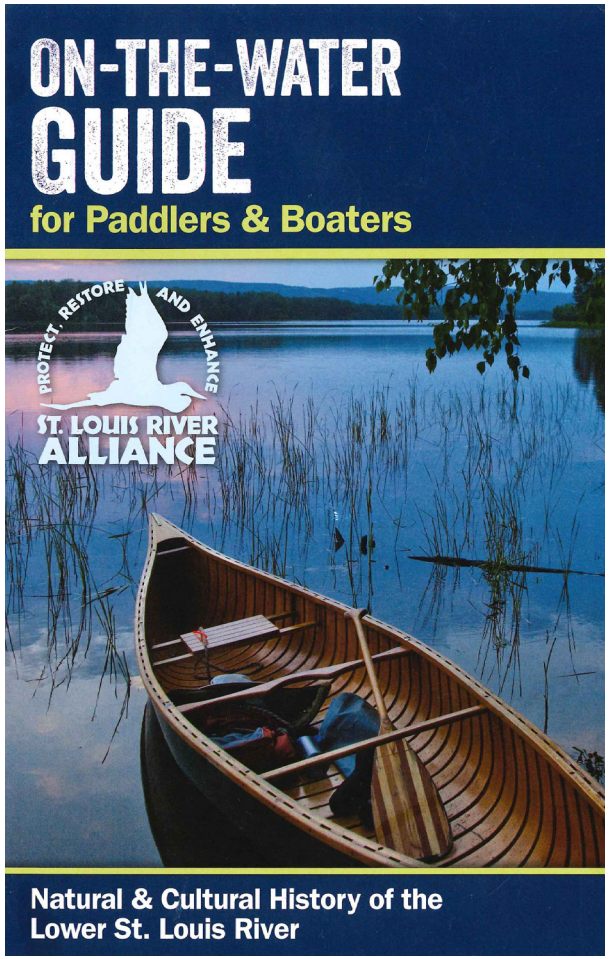
In a succeeding phase of development, digital interactive maps could be constructed and would be housed on the website. These maps provide small icons related to a point-of-interest. When clicked on, a small window pops-up. These pop-up icons explain the point-of-interest and may even include a photo. In the final phase, digital maps that can be downloaded to smartphones or GPS instruments would be constructed. With these maps the river traveller can track their travel progress just as you would on a car's GPS.

#5 - Develop Informational Brochures

Printed brochures will be published and updated regularly. The content will cover the same information about the river and its usage as found on the website and backs of map. However, because of limited space, brochures will only include the most vital or essential topics. Each topic will be a brief, summarized version of that information found on the website.

The usual contact information (address, phone number) will be located at the back of the brochure. Website and social media URL addresses will be strategically located so they are easily found. The St. Louis River Estuary Water Trail logo will be prominently displayed to further help with branding. Included near the logo will be a slogan, which further enhances branding attempts. In summary, brochures will include the following topics and items:

» General map of the area
» Contacts for further information—phone, website address, social media
» Logo and name - St. Louis River Estuary Water Trail
» Brief introductory statement highlighting the significance of a River Estuary experience and the scenic beauty of this estuary along with an example or two
» Explanation of points of interest and links
» Explanation of some key annual river events
» River sponsors:
  - Businesses: Lodging, outfitters, hospitality
  - Agencies/Organizations: Visitor Bureaus, city Parks and Recreation departments, River Alliance, DNR, Fond Du Lac Band of Lake Superior Chippewa, paddle clubs, fishing and hunting associations



The St. Louis River Alliance's On-The-Water Guide

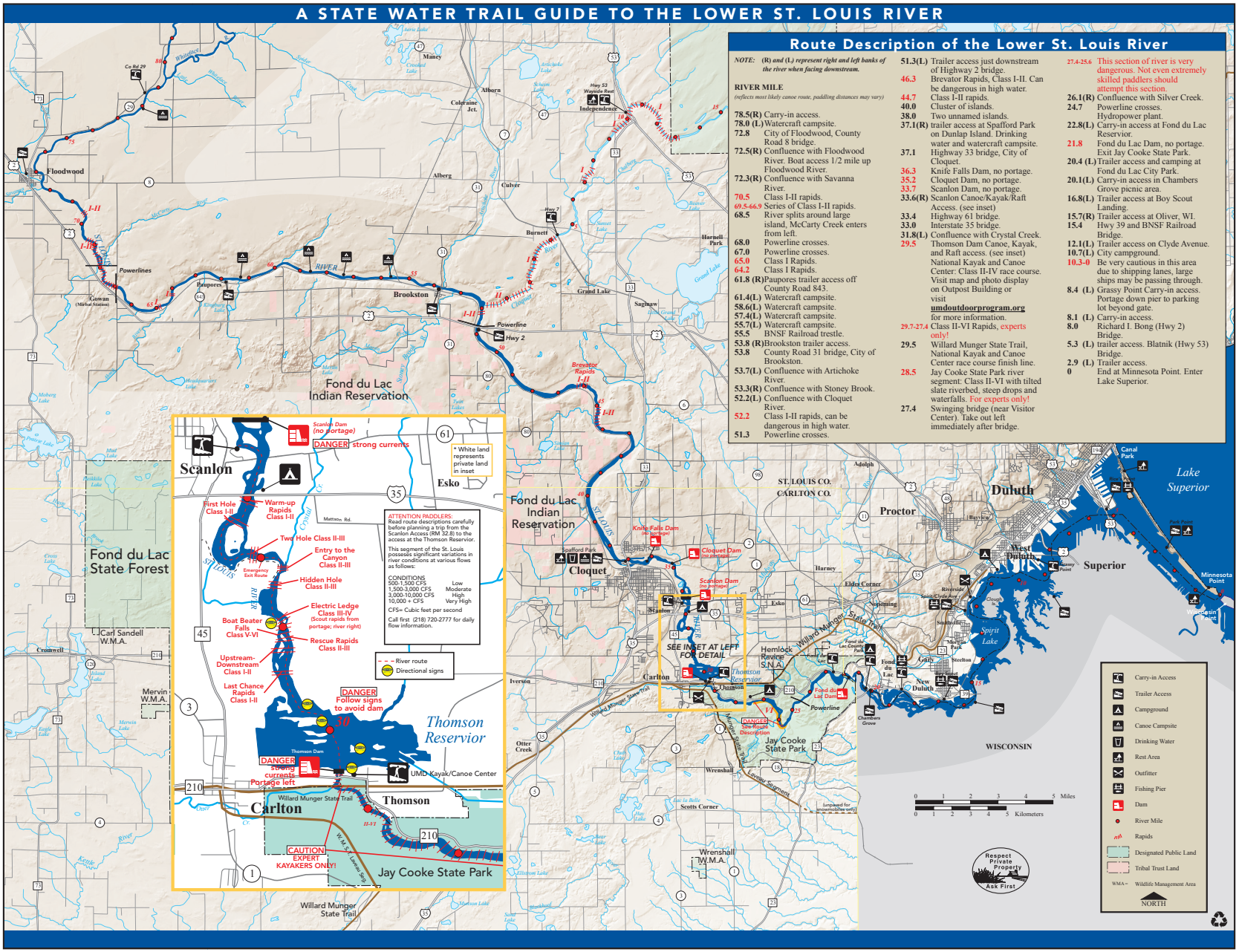
#6 - Develop a System of Directional River Estuary Access Signage

Signage on highways and roads leading to the river will direct visitors to the access points and points-of-interest on the river. Signage and icons will be consistent with existing St. Louis River signage on the respective sides of the river, as the MNDNR and WIDNR have signage standards in place today. Kiosks and signs at each landing will include the do's and don'ts rules of the river, a map of the entire river, and river ecology information, etc.

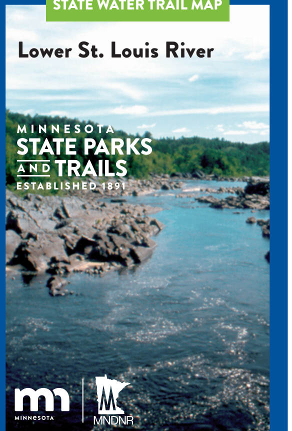
Informational signs will be placed at designated rest stops, campsites, portages, and points-of-interest. These signs will identify what the site is and should include certain usage and protection policies. These signs will include the Water Trail logo and be similar to the access sign's basic format so as to be recognized as part of Water Trail signage system. Any additional Water Trail signage will need to be approved with the appropriate state jurisdiction based on the site.

#7 - Participate in Collaborative Marketing Campaigns

Already a number groups in the Twin Ports region work together to market outdoor recreation tourism. Go Guides and Visit Duluth Guides as well as other regional planning and outdoor groups print and distribute information throughout the region on amenities, attractions, lodging, etc. Continuing to explore partnerships in marketing and messaging about the Water Trail should be considered in the future.



The St. Louis River was legislatively designated in 1967 as a Minnesota State Water Trail, long before most states had organized paddle sports recreation infrastructure or designations. Many of the existing facilities (public water accesses, campsites, rest areas, etc.) on the river are the result of this designation. Minnesota DNR has the first and largest Water Trails system in the nation, and has been very involved in the expansion of Water Trail planning and programming at the national level, including providing assistance to the National Park Service in the development of criteria for National Water Trail designation.



The Minnesota Department of Natural Resources is an Equal Opportunity Employer.

This information is available in alternative format upon request.

Minnesota State Parks and Trails Regional Unit:
1201 East Highway 2 Grand Rapids, MN 55744
(218) 999-7923

Online water trail information and maps can be found at mndnr.gov/watertrails

DNR Information Center

The DNR's Information Center is available to provide free publications of facilities and services as well as answers questions pertaining to DNR recreational opportunities in Minnesota.

500 Lafayette Road
St. Paul, MN 55155-4040
651-296-6157 Metro Area
1-888-646-6367 MN Toll-Free

mndnr.gov

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Organizations working to protect the river system:
-St. Louis River Citizens Action Commitee (218) 733-9520
-St. Louis Riverwatch (218) 879-0789

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A STATE WATER TRAIL GUIDE TO THE LOWER ST. LOUIS RIVER

ST. LOUIS RIVER ESTUARY

The Lower St. Louis River (Floodwood to Duluth)

HIGHWAY 61 BRIDGE, SCANLON

The lower St. Louis River has a varied character. While usually surrounded by woods, bogs, and rocks, the river also passes by major cities and industries. The current in this section varies from a leisurely paddling speed to a raging torrent.

Between Floodwood and Cloquet, the river has a steady current with occasional rapids. There are several campsites and many spots to explore, swim, pick berries, and look for wild leeks. You might find ancient Indian food caches or other artifacts. Please do not disturb these sites.

Below the city of Cloquet, the river becomes wild, as rocky rapids increase in frequency and intensity. There are also several dams in this stretch. At County Highway 61 in Scanlon, there is access to the river for whitewater rafting and decked canoeing and kayaking.

Below Thomson Dam and through much of Jay Cooke State Park, the intensity of the river increases even more, as the river plunges through a series of rocky gorges. Canoeists should not to attempt this stretch.

Downstream of Jay Cooke State Park the river becomes wider and more easily canoeable. The St. Louis Bay becomes a major transportation route for huge freighters traveling the Great Lakes. On this section of the St. Louis River you will find many different land types, from the remote to the agricultural to the urban areas of Duluth and Superior.

THOMSON DAM

History

The history of the lower St. Louis River is similar to the other rivers of northern Minnesota. However, the lower St. Louis had a unique role as a transportation connection between Lake Superior and the Mississippi River. It was used by Native Americans, early European explorers, and trappers. The connection was completed by the Savannah Portage, a six-mile overland carry that connected the West Savannah River, which flows into the Mississippi, to the East Savannah River, which flows into the St. Louis River near Floodwood.

The Dakota Indians inhabited the St. Louis River area, including its rich estuary along the shores of Lake Superior, but were driven out by the Ojibwe in the early part of the 17th century. An important Ojibwe settlement called Fond du Lac (French for "head of the lake") was developed on the estuary.

The Ojibwe were in the area when the first European fur trappers and traders began using the river for the transportation of furs and supplies. Eventually, the Ojibwe abandoned Fond du Lac and established their settlement on the river's banks near what is now Cloquet. The site of this former village can be located by a large rock on the west bank about 500 yards upstream from Spafford Park.

Loggers were next to make use of the river. The first crews blasted rock formations, logjams, and curves to prepare the river for the big spring log drives. The logging era began in 1878 when the first sawmill was built at Cloquet. It ended in 1924, the year of the last log drive on the St. Louis River.

JAY COOKE STATE PARK

Above Cloquet, the remains of an old logging camp can still be found on the east shore (about River Mile 48.5). Also at this point, a series of small rocky islands were used by sorters from various mills who stood on the islands and sorted the logs according to the brand stamped on the ends. Today the islands provide good smallmouth bass fishing, or a good spot to find an old white pine log recently freed from the river bottom.

St. Louis Estuary

The St. Louis River estuary is a large body of water extending from Lake Superior to extreme western Duluth. The western end of the estuary is popular for motorboating, and the eastern end is utilized by ocean-going ships. The shoreline is a mixture of forest, wetlands, and major industries. When paddling on the estuary, remember to avoid the shipping channels and to respect private property. Also note that wind can come up very quickly and change paddling conditions.

Fishing

The St. Louis River has a diverse and excellent fish population. Walleye, smallmouth bass, and northern pike are popular catches. The river holds a good population of channel catfish, providing a unique fishery for anglers in northern Minnesota. The St. Louis River estuary is also home to the mighty muskellunge. The DNR is working to re-establish the once-thriving sturgeon population in the St. Louis River watershed. If you catch one of these ancient fishes, you are required to return it to the water immediately.

Mercury contamination is a problem for the entire watershed. Because this river system has an excellent fish population, it is necessary to know the health hazards of eating the fish. Keep smaller fish for eating, release the older, larger fish which have a higher concentration of contamination. People, especially women of childbearing age and children, should strictly adhere to guidelines set by the Minnesota Department of Health. Complete information is available by calling 1-800-627-3529.

Exotic Species

The waters of the St. Louis River below Fond du Lac Dam are infested by invasive plants and animals. These invaders degrade habitat and water quality. Minnesota law prohibits transportation of these species. Brochures are available through fishing centers and the DNR.

Some of the exotic invaders include zebra mussels, round goby, Eurasian ruffe, spiny waterflea, purple loosestrife, threespine stickleback, rusty crayfish, and white perch. Purple loosestrife seeds should be brushed from clothing and footwear. The seeds, about the size of ground pepper, are invisible in mud. The spiny waterflea forms gelatinous-like blobs that stick to fishing line, swivels, and lures. Eggs remain viable out of the water for weeks, even months. Careful cleaning of all equipment will prevent their spread.

To prevent the spread of these species:

- Remove aquatic plants and animals from your watercraft and equipment before leaving the lake.
- Drain lake or river water.
- Dispose of leftover live bait on land.
- Rinse watercraft with high pressure and hot water.
- Allow watercraft to dry for at least five days.

Enjoy!

Use all of your senses to enjoy the diversity of plants and animals. Listen for the slow, heavy beating of the great blue heron's wings, or the whirr of a hummingbird as it hovers over bell-shaped flowers. In the evening, some people can hear the echolocation of the many bats. Enjoy the subtle beauty of cedar waxwings and the ever-changing colors of the waters as day turns into evening.

KAYAKER NEAR THOMSON DAM

Rating Whitewater

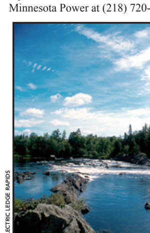
Rivers and rapids are rated according to the International Scale of River Difficulty. Ratings are estimates based on observations at low or moderate water levels or on secondhand reports.

CLASS I. Easy rapids with small waves and few obstructions.
CLASS II. Rapids with waves up to three feet high. Some maneuvering is required.
CLASS III. Difficult rapids with high, irregular waves capable of swamping an open canoe. Narrow chutes may require extensive maneuvering. Usually considered the limit for an experienced paddler in an open canoe.
CLASS IV. Long, turbulent rapids with high, irregular waves, constricted passages, and blind drops. Decked canoes and kayaks only; open canoes should be portaged.
CLASS V. Long, violent rapids with complex routes and steep drops or waterfalls. Hazard to life in the event of a mishap. Runnable only by experts in decked boats.
CLASS VI. Cannot be attempted without great risk to life.

Planning a Safe River Trip

A successful river trip is safe. To enjoy a safe journey, you should be prepared by acquainting yourself with your route. Choose a distance that is comfortable for you. Water levels can speed up or slow down your trip: get information about water levels from the regional DNR office, DNR website, or DNR Information Center.

Protect the water and shorelands and leave nothing behind you except footprints. Remember that much of the shorelands are privately owned. For daily water level reports below Scanlon and Thomson Dams, contact Minnesota Power at (218) 720-2777.



ELECTRIC LEDGE RAPIDS

Trip Planning

- Travel with a companion or group. Plan your trip with a map before you depart and advise someone of your plans, including planned departure and arrival times.

- Most people paddle two to three river miles per hour.

- Bring a first-aid kit that includes waterproof matches.
- Be cautious of river obstructions, such as overhanging and dead trees in the water.
- You must pack out all trash.
- Leave only footprints; take only photographs!

Boating Information

- Wear a U.S. Coast Guard-approved personal flotation device that state law requires to be on board the craft.
- Bring an extra paddle.
- Not all portions of this water trail are suitable for motor use.
- Register your watercraft. All watercraft more than 9 feet in length, including nonmotorized canoes and kayaks, must be registered in Minnesota or your state of residence.

Rest Areas and Camping Sites

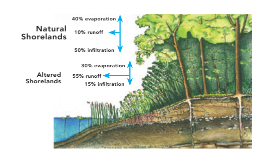
- Public rest areas are available along the route to rest, picnic and explore.
- Camp only in designated campsites, which are available on a first-come, first-served basis.
- Bring drinking water. It is only available at a limited number of rest areas. Drinking river water is not recommended, but if you do it must be treated.
- Respect private property. Stop only at designated sites; much of the shoreland is private property.
- Be sanitary! Use designated toilet facilities or bury human waste away from the river.

Sustainable Ecosystems

Outdoor recreation is dependent on a healthy and attractive natural environment. Sustainable outdoor recreation enables people to enjoy the outdoors without negative impacts on the environment.

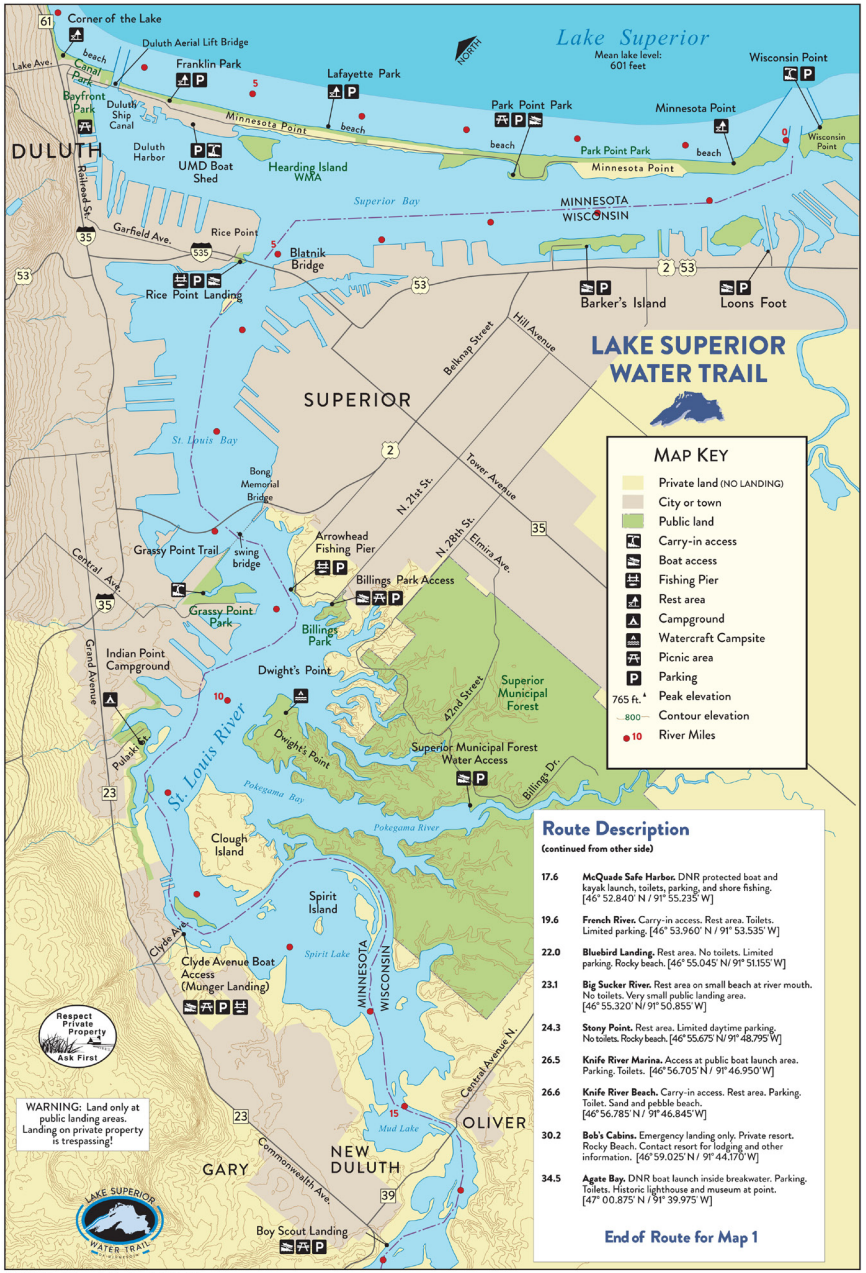
Communities working together can improve water resources by promoting environmentally sensitive land-use practices along rivers and throughout watersheds. Natural shoreline buffers improve water quality by filtering out pollutants and sediments.

Healthy and diverse native shoreline plant communities are attractive and provide important habitat for birds and wildlife.



The back cover of the Minnesota State Water Trail Map highlights the spectrum of activities on the lower St. Louis River Estuary

St. Louis River and Minnesota Point to Canal Park



Route Description

(continued from other side)

17.6 **McQuade Safe Harbor.** DNR protected boat and kayak launch, toilets, parking, and shore fishing. [46° 52.840' N / 91° 55.235' W]

19.6 **French River.** Carry-in access. Rest area. Toilets. Limited parking. [46° 53.960' N / 91° 53.535' W]

22.0 **Bluebird Landing.** Rest area. No toilets. Limited parking. Rocky beach. [46° 55.045' N/ 91° 51.155' W]

23.1 **Big Sucker River.** Rest area on small beach at river mouth. No toilets. Very small public landing area. [46° 55.320' N/ 91° 50.855' W]

24.3 **Stony Point.** Rest area. Limited daytime parking. No toilets. Rocky beach. [46° 55.675' N/ 91° 48.795' W]

26.5 **Knife River Marina.** Access at public boat launch area. Parking. Toilets. [46° 56.705' N / 91° 46.950' W]

26.6 **Knife River Beach.** Carry-in access. Rest area. Parking. Toilet. Sand and pebble beach. [46° 56.785' N / 91° 46.845' W]

30.2 **Bob's Cabins.** Emergency landing only. Private resort. Rocky Beach. Contact resort for lodging and other information. [46° 59.025' N / 91° 44.170' W]

34.5 **Agate Bay.** DNR boat launch inside breakwater. Parking. Toilets. Historic lighthouse and museum at point. [47° 00.875' N / 91° 39.975' W]

End of Route for Map 1

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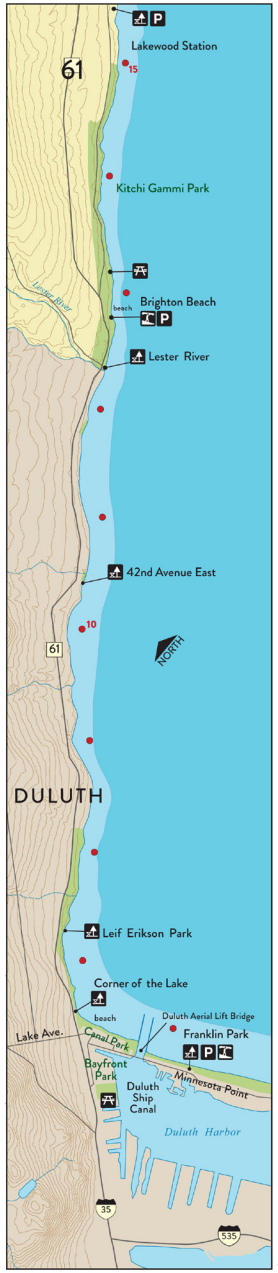
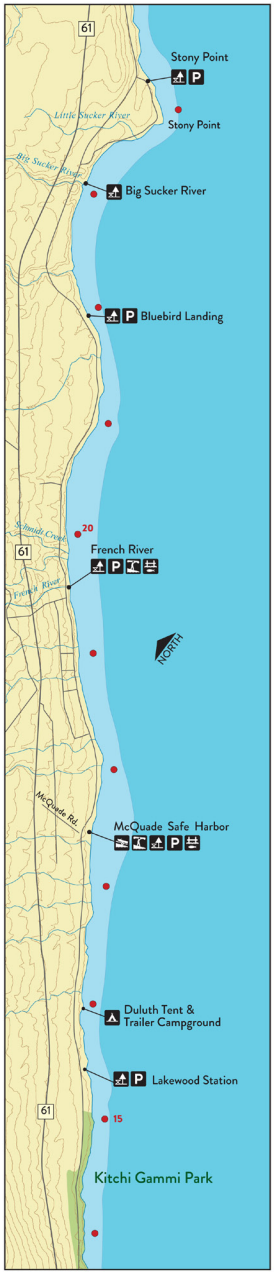
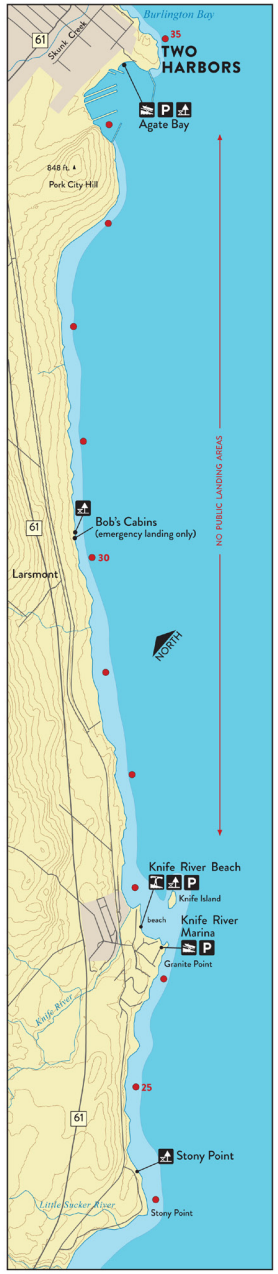
Canal Park to Lakewood



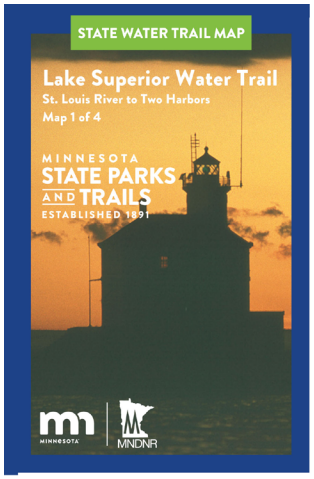
Lakewood to Stony Point



Stony Point to Two Harbors



The Lake Superior Water Trail (North Shore) was legislatively designated in 1993. Volunteers from the Lake Superior Water Trail Association were instrumental over the next 12 years in developing infrastructure and promoting paddling in the Twin Ports area and along the entire North Shore. This State Water Trail is directly adjacent to the St. Louis River Estuary Water Trail. Above is the map segment from Duluth to Two Harbors.



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This information is available in alternative format upon request

Minnesota State Parks and Trails
500 Lafayette Road Box 52
St. Paul, MN 55155–4052

INFORMATION

Minnesota Department of Natural Resources Information Center
Metro 651-296-6157
888-MINNDNR (646-6367)
TDD Metro 651-296-5484
TDD MN toll free 800-657-3929

DNR Parks & Trails
651-259-5000

DNR Web Site
mndnr.gov

ASSISTANCE PROVIDED BY:

Lake Superior Water Trail Association of Minnesota

Matt Kania Map Illustrations

This map is not intended as a sole source for navigational information.

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LAKE SUPERIOR

Lake Superior is the largest freshwater lake on our planet, containing 10% of all the fresh water on earth. The lake's 32,000 square mile surface area stretches across the border between the United States and Canada; two countries, three states, one province and many First Nations surround Superior's magnificent shoreline. The diverse natural history and cultural heritage of the Lake Superior region offers paddlers a unique experience on this remarkable global resource.

THE LAKE SUPERIOR WATER TRAIL

Established by the Minnesota Legislature in 1993, the Minnesota portion of the Lake Superior Water Trail extends from the St. Louis Bay in Duluth to the Pigeon River on the Canadian border, a distance of approximately 150 miles. Cooperative efforts in Ontario, Wisconsin, Michigan and First Nations will develop a Water Trail completely around Lake Superior, primarily for use by sea kayakers. The development and maintenance of the Water Trail is a joint effort of the Minnesota Department of Natural Resources and the Lake Superior Water Trail Association of Minnesota.

Map 1 of the Water Trail includes the "Mile Zero" start of the trail at the famous Lift Bridge in the Canal Park area of Duluth. This is the western-most corner of Lake Superior and the Water Trail begins its northeasterly course past low cliffs, stately mansions, cobblestone beaches, gentle headlands, and small resort communities as you travel toward Two Harbors. This map also shows the estuary of the St. Louis River, a unique resource of undeveloped backwaters and industrial waterfront spread between the cities of Superior and Duluth, and protected from the open waters of Lake Superior by the world's longest freshwater sandspit. This maze of bays provides kayakers and canoeists with a multitude of touring possibilities, particularly useful when the Big Lake is serving up less than ideal conditions.

THE LAKE SUPERIOR EXPERIENCE

Lake Superior, born in fire and ice, has offered adventuresome travelers endless miles of discovery for thousands of years. The geological history and features of the northwestern shoreline reveals some of the oldest rock formations on earth and are a testimony to the great forces of nature which created this great lake.

Although the North Shore of Lake Superior is located on the southern fringe of the boreal forest, the cold, harsh conditions created by Superior's cold waters resemble a subarctic ecosystem. Brilliant lichens, mosses, wildflowers, and rare plants – such as lignonberry, butterwort or cloudberry – together with spruce, white pine, aspen and birch soften the rugged shoreline.

The North Shore's cultural history and diversity is no less impressive. The North Shore offers the paddler an opportunity to learn about the people and traditions of the First Nations of the lake and the European influence of early explorers, missionaries and fur traders. Evidence of the history of the lumber, mining, shipping, and commercial fishing industries are found all along the shore.

FOR YOUR SAFETY

The many shipwrecks along the North Shore are tragic reminders of the power and fury of Lake Superior. That power is something every paddler must respect and not underestimate. The same dramatic features that enrich the shoreline experience, such as lake cliffs, can pose serious hazards to unwary paddlers; placid summer waters can change in minutes to life-threatening conditions and cliff areas can prevent paddlers from seeking safety on shore. A paddler needs to be prepared mentally and physically to deal with these conditions and possess the paddling skills necessary to assure their own safety and that of others. Local marine weather forecasts should be monitored before and during any trip on the lake. A paddler needs to understand the implications these forecasts have on overall lake conditions, as well as the shoreline area you plan to travel. Wave heights can be greatly increased by shoreline features and currents.

- **Always wear a U.S. Coast Guard approved personal floatation device.**
- **Be familiar with dangers of hypothermia and dress appropriately for the cold water (32 to 50 degrees Fahrenheit).**
  Cold water is a killer – wearing a wet or dry suit is strongly recommended.
- **Seek instruction and practice kayak skills, including rescues, before paddling on Lake Superior.**
  Be certain your boat has adequate bow and stern flotation and that you have access to a pump for emptying a flooded boat.
- **Travel with a companion or group.**
  Know the skill level of other paddlers in your group. Discuss safety issues before leaving shore.
- **Study shoreline features on your chart and review exit points before launching.**
  Remember, cliffs can cause additional water turbulence and prevent you from going ashore.
- **Fog frequently restricts visibility to zero.**
  Bring a good compass and know how to use it.
- **Anticipate changes in weather, wind and waves by monitoring a weather or marine VHF radio, and using your awareness and common sense.**

The National Weather Service broadcasts a 24-hour updated marine forecast on KIG 64, weather band channel 1 on the maritime VHF frequency, from Duluth; a version of this broadcast can be heard by calling 218-729-6697, press 4 for Lake Superior weather information. The VHF radio can also be used to call for emergency help.

- **Other items recommended for paddlers to carry:**
  Spray skirt; float for paddle; whistle and emergency flares; water, snacks and sunscreen; and compass.
- **The Duluth Harbor is a major port in the U.S.**
  Familiarize yourself with the rules of the nautical road and stay out of the shipping lanes. When using the Minnesota and Wisconsin entrances be aware that while inbound ships are easily spotted at some distance, the outbound ships are not visible from the end of the entrances. When paddling through the entrances stay to the right side in order to not give up your right of way. Obtain a chart of the Duluth Harbor for specifics regarding shipping lanes.
- **Beware of special paddling hazards in the Duluth-Superior harbor area.**
  Outgoing currents through the Minnesota and Wisconsin entrances can clash with incoming reflected waves to create chaotic paddling conditions. Stay near the shore and keep well away from commercial and recreational boating traffic. Fog can be a particular hazard in busy areas. Several areas in the St. Louis Bay may be subject to waterfowl hunting seasons.
- **Each paddler is required to have a wearable U.S. Coast Guard personal flotation device readily accessible and there must be a bright white light on board each kayak or canoe after sunset to be displayed in time to prevent a collision.**

ALL PHOTOS BY ANDY KNAPP

LAKE SUPERIOR

Lake Superior is the largest freshwater lake on our planet, containing 10% of all the fresh water on earth. The diverse natural history and cultural heritage of the Lake Superior region offers paddlers a unique experience on this remarkable global resource.

- **All watercraft (including non-motorized canoes and kayaks longer than 9 feet) must be registered in Minnesota or the state of residence.**
- **Choose your trip and daily travel distance in relation to experience, fitness and an average kayaking speed of 2-3 m.p.h..**
  Changing lake conditions can greatly affect distances traveled.
- **This map is not adequate for sole use as a navigational aid.**
  USGS topographic maps and NOAA charts of the North Shore can be obtained from a variety of sources, such as kayaking or camping gear retailers. Learn how to use maps and a compass for navigation before setting out on the lake.

CAMPING OPPORTUNITIES

Camping is permitted at designated sites only. The following options are available:

- **Campgrounds – state park, municipal and private campgrounds.**
  These are generally located inland. They make a good base camp for day trips. Fees are charged and reservations are advisable.
- **Kayak/backpack campsites in state parks.**
  These primitive sites are accessible by water or foot trail only. Most of these sites have fire rings. Fees are charged, and reservations are required. At these sites, all state park rules apply and all vehicles must have a state park vehicle permit.
- **Water Trail kayak campsites.**
  These primitive sites are accessible from the lake only. There is no parking allowed. They are available on a first-come, first-served basis, with no fee charged at this time. The campsites are intended for a one night maximum stay, weather permitting. Group sizes are limited to six paddlers; please be courteous to others sharing adjacent sites. Fires are not allowed. Pleases leave campsites as clean or cleaner than you find them and carry out all trash. For more information on individual site capacity, refer to the route description portion of this map.
- **Low impact camping.**
  Please tread very lightly when you are on land. Use only established trails. (Notice that even walking on what appears to be a "plain" rock surface there are many brightly colored lichens, mosses and tiny plants.) Avoid walking on mosses and lichens along the shore. The use of camp stoves at campsites is recommended. Within state parks campfires are allowed in fire rings only.
- **Camp in groups of 6 or less. Camp only in designated areas that are marked on the map.**
- **Respect private homes and property along the shore!** Please take breaks and camp only at designated areas.

DRINKING WATER

Drinking water is not provided at most of the campsites. Be prepared to treat all water from the lake and rivers. Carry all your water needs when paddling in the St. Louis River estuary.

ENJOY

Lake Superior is a spectacular environment for a sea kayaker to experience the world's largest freshwater lake. The natural history and cultural diversity will provide additional dimensions to the experience. Enjoy all that Lake Superior has to offer, respect the lake and tread lightly on her shores. Have a great time!

HOW CAN I HELP?

For Association membership and information on becoming involved with the Lake Superior Water Trail Association (LSWTA), write to:

Lake Superior Water Trail Association of Minnesota
Waters of Superior
395 S. Lake Avenue
Duluth, MN 55802

Visit the LSWTA website:
LSWTA.org

LAKE SUPERIOR WATER TRAIL OF MINNESOTA

Route Description

In Miles (0.0 at Minnesota Entrance – Duluth Lift Bridge).

Note: Mile markers for sites within the St. Louis River and along Minnesota Point are relative distances based on the map's linear scale. Actual paddling distances between sites will vary.

Note: (L) and **(R)** represent left and right banks of the St. Louis River when facing downstream (facing lakeward).

St Louis River and Bay – Minnesota Side:

16.9 **Boy Scout Landing. (L)** Boat access, toilets. Limited parking. [46° 39.205' N / 92° 13.580' W]

12.0 **Clyde Avenue Boat Launch. (L)** Boat launch, pier, toilets, parking. [46° 42.050' N / 92° 12.430' W]

10.6 **Indian Point Campground. (L)** City of Duluth campground, carry-in access, toilets. Landing at boat docks. Call for information/reservations. [46° 43.260' N / 92° 10.935' W]

8.4 **Grassy Point Trail. (L)** Parking. Portage down boardwalk pier to overlooks. Launch also possible at Keene Creek. [46° 43.568' N / 92° 09.282' W]

5.3 **Rice Point Landing. (L)** Public boat launch, parking, toilets. Under Hwy 53/Blatnik Bridge on the Minnesota side. [46° 45.080' N / 92° 06.180' W]

St Louis River and Bay – Wisconsin Side:

10.8 **Superior Municipal Forest Boat Launch. (R)** Undeveloped public boat access, no toilets, limited daytime parking. This 4,432-acre forest is the second largest municipal forest in the nation.It contains a wealth of unusual natural features including stands of mature coniferous forest, extensive emergent marsh, and wet clay flats supporting a mixture of shrub swamp and wet meadow. [46° 40.995' N / 92° 09.150' W]

9.7 **Dwight's Point. (R)** Primitive campsite. Not maintained by city. No toilets. Fires allowed. Not marked with sign. [46° 42.550' N / 92° 09.645' W]

9.1 **Billings Park Access. (R)** A city park with boat launch. Daytime parking. Fee charged to use boat launch. Facilities. Picnic areas. No camping. [46° 42.795' N / 92° 08.465' W]

9.0 **Arrowhead Fishing Pier. (R)** A public fishing pier, toilets, limited parking. [46° 43.110' N / 92° 08.670' W]

2.3 **Barker's Island. (R)** Public boat launch. Fee charged to use boat launch. Toilets, daytime parking. [46° 43.105' N / 92° 03.440' W]

0.8 **Loons Foot. (R)** Public boat launch. Fee charged to use boat launch. Toilets, daytime parking. [46° 42.010' N / 92° 02.060' W]

0.0 **Wisconsin Point.** A city of Superior natural area. Lighthouse, parking, no facilities. Protected launch on beach inside breakwater. Beware of ships, currents, and reflected waves in channel out to lake. [46° 42.370' N / 92° 00.775' W]

Minnesota Point:

0.8 **Minnesota Point.** Rest area. No toilets. No camping. Caution: poison ivy prevalent in area. Sand beach landing. [46° 42.660' N / 92° 01.455' W]

2.6 **Park Point Park.** A Duluth city boat launch. Daytime parking, bathroom facilities, picnic areas, no camping. [46° 43.925' N / 92° 03.365' W]

4.2 **Lafayette Park.** Rest area, toilets, daytime parking. Sand beach landing. [46° 45.145' N / 92° 04.265' W]

5.7 **Franklin Park.** Rest area, limited daytime parking. Seasonal toilets. [46° 46.320' N / 92° 05.235' W]

5.7 **UMD Boat Shed.** Carry-in access, parking. [46° 76.872' N / 92° 08.8524' W]

North from Canal Park:

6.7 **Corner of the Lake.** Rest area. Duluth Public Park and Lake Walk. Facilities. Nearby metered parking. Westernmost point of Lake Superior. Sand and pebble beach. [46° 47.225' N / 92° 05.640' W]

7.3 **Leif Erikson Park.** Creek drainage through cement culvert. Pebble and sand beach landing. No facilities near landing. [46° 47.717' N / 92° 05.163' W]

10.4 **42nd Avenue East.** Rest area, no facilities, no camping. Rocky beach. [46° 49.235' N / 92° 02.305' W]

12.4 **Lester River.** Rest area. Sand and cobblestone beach near mouth of river. Facilities and tourist information kiosk near parking lot off of Hwy 61. [46° 50.190' N / 92° 00.350' W]

12.7 **Brighton Beach.** A Duluth city park. Carry-in access, daytime parking, toilets, picnic area. No camping. [46° 50.595' N / 91° 59.545' W]

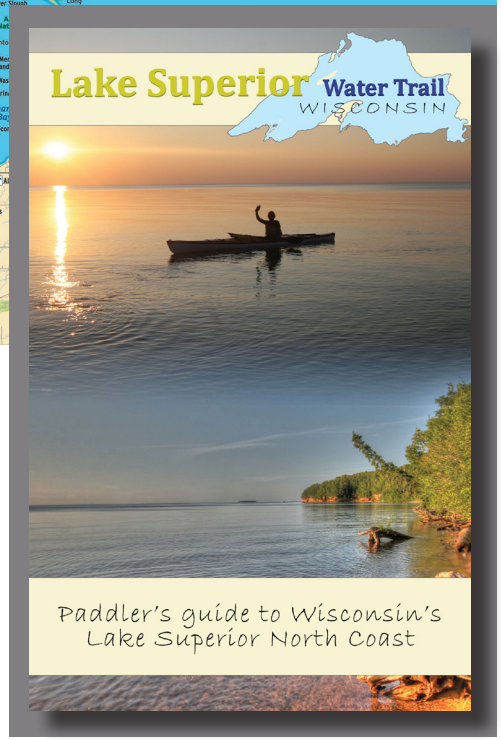
15.5 **Lakewood Station.** Rest area, no toilets. Daytime parking on east side of Hwy 61. [46° 51.805' N / 91° 57.445' W]

16.0 **Duluth Tent & Trailer Campground.** Steep bank up to Hwy 61. Private campground located across Hwy 61. Contact campground for camping. [46° 52.110' N / 91° 56.950' W]

(continued on other side)

The back cover of the Lake Superior Water Trail (North Shore) highlights the spectrum of activities found between the St. Louis River and Two Harbors.

The Lake Superior Water Trail (LSWT) is a network of mapped access points and recreational resources along Wisconsin's Lake Superior south shore. The Water Trail provides a framework for a wealth of environmental, historical, and cultural experiences accessible along the Lake Superior coastline. The LSWT consists of two segments: a 40-mile segment from the St. Louis River to Port Wing and a 30 mile segment from Ashland to the Montreal River at the Wisconsin-Michigan state line. (from the Northwest Regional Planning Commission website).



The Lake Superior Water Trail Guide provides detailed information along with tips and maps to aid in planning your next adventure to Wisconsin's "North Coast". The Water Trail is organized into 12 segments, each with its own distinct character, challenges and rewards. Paddlers of all abilities will find outings that will be well matched to their skills and interests. From sheltered bays and estuaries to breathtaking cliffs and sea caves, Wisconsin's Lake Superior Water Trail offers something for everyone. (From the Northwest Regional Planning Commission website).

WISCONSIN'S Lake Superior Water Trail

More Than A Trail,

the Wisconsin segment of the Lake Superior Water Trail covers more than 400 miles of diverse shoreline. The designation of the Wisconsin coast as a water trail echoes the inherent trail that has been here for centuries. This route, and other water routes of North America, have served as historic highways — for travel, exploration and trade.

The modern Lake Superior Water Trail is an on-going effort to connect the 3,000 miles of shoreline that border Lake Superior along Minnesota, Michigan and Wisconsin and Ontario, Canada. The trail will link communities and inspire travelers to safely explore new regions of Lake Superior. The Lake Superior Water Trail was formed on the philosophy that low-impact recreational use and stewardship of the land and water protects local natural and cultural resources. Water trail segments and corresponding maps exist for the Minnesota shore and sections of the Michigan shore.

The South Shore of Lake Superior

Known for its clear, cold water (with an average annual temperature of 45 degrees) and mix of dramatic cliffs and sand beaches, Lake Superior is the largest, least populated and cleanest of the Great Lakes. The "South Shore" is the sandy side of the lake blessed with miles of beaches, red clay bluffs and sandstone formations including the dramatic sandstone sea caves. Shrouded in boreal and hardwood forests, the south shore is also host to some of the finest and wildest estuaries in the Lake Superior watershed. Several small communities and cities dot the shoreline along with two Indian reservations (Red Cliff and Bad River), the Apostle Islands National Lakeshore and Big Bay State Park.

The St. Louis River estuary with a mix of wild wetlands and the busy Duluth/Superior harbor define the western terminus of this water trail section. From the city of Superior to the town of Port Wing a traveler passes miles of clay bluffs, small streams, and the Brule River State Forest. Past the scenic village of Herbster, the shoreline begins to reveal sandstone outcrops, which culminate in dramatic cliffs and sea caves in the Apostle Islands National Lakeshore just east of Cornucopia —Wisconsin's northernmost town. The shoreline then passes the Red Cliff Indian Reservation and the historic town of Bayfield with its orchards, commercial fishing, sailing, and tourism. Turning south from Bayfield, the shoreline wraps around Chequamegon Bay with its sandy shoreline, parks, fishing, shipping history, and the twin county seat cities of Washburn and Ashland. From Ashland the shoreline gives way to a wild sand shoreline and the internationally recognized Kakagan Sloughs – Wisconsin's Everglades – within the Bad River Indian Reservation and finally back to the red clay bluffs and sandy beaches reaching the Michigan border, east of Saxon Harbor at the mouth of the Montreal River.

First Nations

Native American peoples have inhabited the Lake Superior region for thousands of years. At the time of European contact as many as six different tribes shared the south shore region. The Anishinabe, commonly known as the Chippewa or Ojibwe, were the dominant tribe when Europeans settled the area. Today the Anishinabe nation (one of North America's largest native nations) includes parts of Wisconsin, Minnesota, Michigan, and Ontario and Manitoba in Canada. Native Americans continue to live along the south shore, harvesting wild rice, fish and wild game. The Red Cliff and Bad River Bands of Lake Superior Chippewa each have a reservation with growing populations and economies that contribute to the diversity of Lake Superior. Madeline Island, part of the Apostle Islands (but not part of the National Lakeshore) is a cultural hub of the Anishinabe Nation. Both Red Cliff and Bad River communities are working to protect and restore their natural environment. The reservation shorelines should be respected as private property. Only Red Cliff has developed shoreline campgrounds at Point Detour and at Buffalo Bay.

Trading for Furs

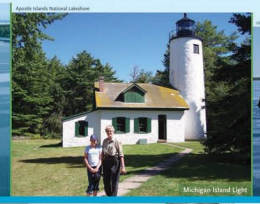
For the first and only time in history, from the 1600s to the 1800s, men's fashion dictated the economy of North American wilderness. As was the style of the time, men demanded felt top hats made of felted fine hair of the beaver, making beaver the unsuspecting currency in this economy. The French explored North America looking for sites to trade with the Native people, who knew how to build canoes and where to find the furs, along the water trails that cross the continent.

In 1693, the French established a trading post at Grant's Point on Madeline Island; one hundred years later the English took over trade in this region and established a fur trading post at La Pointe. Men and canoes transported furs at first to Montreal and later to New Orleans — where they then made their way to Europe. By 1840, the felt top hat had started to fall out of favor and the beaver was on the decline: the fur trade moved west. However, many traders remained, shifting their efforts to commercial fishing or fruit farming.

Cover photo and photo below, copyright John and Ann Mahan

Raspberry Island

Apostle Islands National Lakeshore



Michigan Island Light

Copyright John and Ann Mahan

Paddling along the Wisconsin coast

Wisconsin Historical Society

Ojibwe man harvesting wild rice

Apostle Islands National Lakeshore

Endangered species: Piping Plover

This map is to be used as a general resource guide for paddlers interested in Wisconsin's Lake Superior shore. It introduces the area's rich natural and cultural resources and provides information about access, resting, and camping sites suitable for kayaks and small boats. It encourages respect and stewardship for the resources so that boaters today and in future generations may enjoy them. This map is not intended as a sole source of navigation. Consult guidebooks, topographical maps, navigational charts, and weather information when planning your trip.

This project received a technical assistance grant from the National Park Service Rivers and Trails Program. Others providing assistance include Inland Sea Society, Living Adventure, Inc., Map Hero, Inc., National Park Service's Apostle Islands National Lakeshore and Great Lakes Inventory and Monitoring Network, Northwest Wisconsin Regional Planning Commission, Red Cliff Band of Lake Superior Chippewa, Wisconsin Department of Natural Resources, Wisconsin Sea Grant Program.

Funded by the Wisconsin Coastal Management Program and the National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management under the Coastal Zone Management Act, Grant # NA05NOS4191067. Additional funding provided by: Inland Sea Society and the National Park Service Challenge Cost Share Program.

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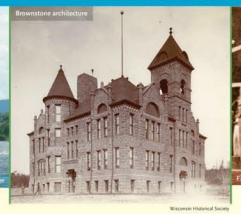
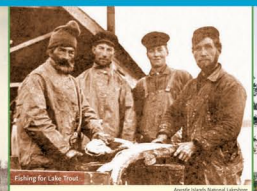
Great Lakes iron ore taker

Ken Newhams, Duluth Shipping News



Brownstone architecture

Wisconsin Historical Society



Fishing for Lake Trout

Apostle Islands National Lakeshore

White pines on Wisconsin coast

Matt Kania

Sailing the inland sea

Bob Firth Photobank

Lake Sturgeon recovery program

Wisconsin DNR

Fishing the Inland Sea

For hundreds of years, tribal fishermen harvested fish using birchbark canoes and nets or traps made by hand. They also speared fish through the ice in the winter and in the shallows every spring.

Commercial fishing began around 1830 with the decline of the fur markets and expanded about 20 percent per year until the 1880s. Catches increased with fish stocking and advances in fishing technology. The golden days of the commercial fishery ended by the late 1950s with overfishing and the introduction of the invasive and parasitic sea lamprey.

Lake trout are a modern day success story on Lake Superior. Populations are at a historically high level because of a successful lake trout stocking program combined with rigorous efforts to control lamprey populations. Unfortunately the genetic stock has been greatly simplified and significant portions of the fishery have been reduced or replaced by introduced species such as smelt, alewife, splake, brown trout, Pacific salmon and others. Exotic species continue to plague Lake Superior and the Great Lakes, with costs estimated at $200 to $500 million per year. The primary vector of exotic species is ocean going shipping vessels that discharge ballast water into the Great Lakes.

The Brownstone Boom

The Lake has seen boom and bust economies tied to extraction of natural resources from furs to fish, iron to silver, timber to sandstone and this history is evident throughout the south shore.

The quarries evident in the Apostle Islands region are the under-told story of Lake Superior. The brownstone industry started in 1869 as a small industry designed for specialty building materials. But then came the Chicago fire in 1871 – and builders sought alternatives to wood. The brownstone industry exploded, helping the expansion of the shipping industry.

Then the Chicago World's Fair in 1893 introduced cement and steel — which began the decline of the brownstone quarries. Quarries are evident in several areas, with notable sites at Hermit Island, Basswood Island, and near Quarry Bay on Stockton Island.

Forested Lands

One of the defining events in the recent history of the region is the almost complete logging of the original forest to build the farms and cities of middle America in the late 1800's. By the early part of the 20th century, the great white pine forests had fallen and the hemlock and hardwood forests would soon follow. Some of the only old growth trees left in Wisconsin are now protected in the Apostle Islands National Lakeshore on Outer, Sand, Devils, and Raspberry islands.

Forests have regrown throughout the region and forestry continues to be a significant part of the economy and culture of the area. The forest is dramatically changed from the original species and structure and the watersheds continue to recover from past logging practices.

Today's Visitors

As tourism grew, the south shore of Lake Superior became known as a vacation destination spot. From the "River of Presidents" — the Brule — in the west, to the fresh air of Madeline Island in the east, visitors have been lured from the cities for rest and recreation. The tradition continues today as a significant and growing part of the regional economy. Kayakers, sailors, and pleasure boaters alike all enjoy the waters of Lake Superior. The Wisconsin section of the Lake Superior Water Trail provides a resource for people seeking to explore this region by sea kayak.

Lake Superior Watershed

Lake Superior has a relatively small watershed, largely forested and thinly populated by 650,000 people across 31,700 sq. mi. The health of the watershed is reflected in Lake Superior's high quality cold, clear water. Though Lake Superior appears pristine, it is impacted by exotic species, development pressures, and pollution. Due to the large surface area, Lake Superior is sensitive to air pollution from cities hundreds of miles away. The U.S. and Canadian governments recognize Lake Superior as a place to demonstrate zero discharge of toxic pollutants. Through the Lake Superior Binational Program, efforts are underway throughout the region to protect and conserve the Lake.

Ecosystem Highlights

Wisconsin's shoreline hosts a diversity of wildlife and plant life of interest to the modern voyageur. High concentrations of black bears have been documented on Stockton Island. The Coaster Brook trout, a native brook trout, is being restored to streams on the South Shore. The federally endangered piping plover has recently re-established nesting sites along the wild sandy shores of Long Island and the Bad River Reservation. Trumpeter swans were reintroduced into the Kakagon Sloughs. The north facing sandstone cliffs host a suite of rare and endangered cold climate plants left behind when the glaciers receded north.

Explorers of the Water Trail should respect this national treasure and practice "leave no trace" camping and become aware of local area closures to protect nesting sites, reduce bear encounters and protect native plants.

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For Your Safety

You are personally responsible for your life and safety while on Lake Superior. Never underestimate the power of weather on Lake Superior and its ability to change from calm to tumultuous in a matter of minutes. In addition, much of the lake's shoreline is wild and inaccessible by land so help is not readily available. Lastly, deadly hypothermia can occur within minutes when exposed to cold lake water. These facts individually or combined compel one to take the necessary training, preparations, and precautions before venturing onto the lake.

- Seek instruction and practice kayak skills, including rescues, before paddling on the lake.
- Wear a U.S. Coast Guard approved Personal Floatation Device.
- Be familiar with the dangers of hypothermia and dress for water temperature - not air.
- Study shoreline features on your chart and review exit points before launching. Reflected waves along cliff areas can be killers.
- Anticipate changes in weather and waves by carrying a weather or marine VHF radio or by visiting the National Weather Service's website for the shoreline at http://www.nws.noaa.gov/om/marine/zone/gtlakes/dlhmz.htm
- A compass is absolutely necessary on every boat. Do not rely solely on GPS units.
- Plan your trip according to your fitness and experience and leave a copy of your itinerary with a friend.
- Travel with a companion or group.
- Pack provisions for at least one extra day.

Water Trail Tips

- Bears are great swimmers and found throughout Wisconsin's coastal region, including the Apostle Islands. Store food accordingly.
- Campfires are STRONGLY discouraged.
- Pack out ALL trash.
- Camping on Public Lands is permitted ONLY at designated campsites. Camping, where allowed, requires reservations and permits. Contact appropriate agencies for camping information.
- Keep tents and beached kayaks 'out of sight' from the water.
- Beach grasses are extremely fragile. Don't trample them.
- Plan to average 2 MPH in a full day's paddle, including lunch and other breaks.

Area Resources

- **Apostle Islands National Lakeshore** 715-779-3397 www.nps.gov/apis
- **Ashland Area Chamber of Commerce** 800-284-9484 www.visitashland.com
- **Bayfield Chamber of Commerce & Visitor's Bureau** 800-447-4094 www.bayfield.org
- **Red Cliff Band of Lake Superior** 715-779-3712 www.redcliff-nsn.gov
- **Washburn Chamber of Commerce** 800-253-4495 www.washburnchamber.com
- **Madeline Island Chamber of Commerce** 888-475-3386 www.madelineisland.com
- **Bayfield County Tourism & Recreation** 800-472-6338 www.bayfieldcounty.org/home.asp
- **Inland Sea Society** www.inlandsea.org

The back cover of the Lake Superior Water Trail (LSWT) map, more than a trail along the southern shore of Lake Superior.

Water Trail Facilities and Maintenance Goals

#1 - Develop a Sustainable Management Structure for the Water Trail

To develop and maintain a Nationally designated water trail requires strong leadership and a properly structured organization that will ensure the development and on-going success of the Water Trail.

It is recommended that a St. Louis River Estuary Water Trail Committee (referred to in the remainder of this chapter as the Water Trail Committee) be created to begin implementation of the Master Plan and the management of the Water Trail. The Water Trail Committee should meet regularly and could be comprised of representatives from the following organizations:

- City Park and Recreation Department—Duluth and Superior
- Department of Natural Resources—Minnesota and Wisconsin
- St. Louis River Alliance
- Northland Paddler Alliance
- National Park Service - Water Trails Unit
- Lake Superior National Estuarine Research Reserve (The Reserve)
- Duluth Audubon Society
- Sierra Club
- University of Minnesota - Duluth, Recreational Sports Outdoor Program
- University of Wisconsin - Superior, Campus Recreation - Outdoor Adventure
- St Scholastica-Outdoor Pursuits
- Duluth Sail & Power Squadron
- Twin Ports Walleye Association
- Friends of Western Duluth Parks & Trails

The Water Trail Committee could be structured as a nonprofit 501(c)(3) by implementing one of the following options: Option one is to have one of the representative organizations listed above house this committee under their existing 501(c)(3). Option two is to have the Water Trail Committee form an autonomous 501(c)(3). A hybrid approach is to start with option one and then pursue option two when sufficient resources become available. The key reason for seeking this nonprofit status is to have tax exemptions and limited liability coverage. Equally important, the Water Trail would gain eligibility for grants that are commonly only given by the National Park Service to designated National Water Trails that have nonprofit status.

The Water Trail Committee would manage the operations until an executive director can be hired. Once a director is hired, the Water Trail Committee will become the St. Louis River Estuary Water Trail Board (referred to in the remainder of this chapter as the Water Trail Board) and the director would then answer to this board. This organization will be responsible for four critical areas:

- Trail development
- Promotion and marketing
- Operations and maintenance, and
- Resource stewardship and protection

The Water Trail Board would work with riparian landowners, local communities and government agencies who have authority for the river and riparian lands adjoining the river estuary. Besides the four previous critical areas, the director will pursue additional partnerships. These newly formed partnerships will focus on enhancing the river users' experiences while simultaneously enhancing and protecting the river's natural resources.

#2 - Further Partnerships/Collaborations/ Agreements for Long-Term Maintenance of the Trail

The common practice is for an agency such as the DNR to provide the funds and supervise the development of river land sites such as landings, primitive campsites, and portages. The maintenance of these sites is usually assigned to a city, town or county through a formal agreement. Another option is for a "Friends of The River" group to assume this role and sign a Memorandum of Understanding (MOU) agreement. A MOU agreement could last for 20-25 years and outlines the strategy for maintenance and upkeep of water trail facilities. If a MOU is not appropriate, a contract agreement could be used instead.

#3 - Provide A Capacity and Commitment for Maintenance

It is important that there be local commitment to maintaining sites along the river. Typically, state and federal agencies, like the DNR or NPS, are too far removed geographically to properly monitor and maintain river sites. Thus, it is critical that local agencies or groups accept the job of maintaining these sites.

Adopt-a-Site Program

An option for providing routine maintenance on sites along the river is to modify the City of Duluth's current "Adopt-a-Spot" program to include water trail access points. A promotional campaign should be developed to recruit groups interested in maintaining a selected site or two along the river. These adopt-a-

site programs require some coordination, including preparing the work agreements, supervising the work, and finding replacements when a group ages out of the program.

#4 - Explore a Broad Range of Funding Mechanisms

Funding can prove to be somewhat of a challenge, especially in periods of challenging economic times. To leverage more financial dollars and meet management goals the Water Trail managers should seek: 1) opportunities to partner with other organizations, forming mutually beneficial relationships; 2) technical assistance from local, state and federal agencies; and 3) grants that are related to either outdoor recreational use, river improvements, historical preservation efforts or river stewardship efforts. Local businesses, particularly those located in the St. Louis River Estuary Corridor or those with complimentary missions and or services could be strong partners for additional sources of funding.

Grants

Grants are a significant source of funding for the Water Trail. They commonly amount to as much as fifty percent of the annual operating budget. The following are relevant river-related grants in Wisconsin & Minnesota:

WI GRANTS FOR RIVERS:

» Knowles-Nelson Stewardship

http://dnr.wi.gov/topic/stewardship/grants/applylug.html

- Urban Rivers (UR)
- State Trails
- Recreational Trails Act (RTA)
- Friends of State Lands
- Local Park

» Recreational Boating Facilities Grant

http://dnr.wi.gov/Aid/RBF.html

» Recreational Trails Act (RTA)

http://dnr.wi.gov/aid/rta.html

Federal Recreation Grant Programs

» Land and Water Conservation Fund (LWCF)

https://www.nps.gov/ncrc/programs/lwcf/funding.html State level

https://www.nps.gov/subjects/lwcf/federalside.htm Federal level

MN GRANTS FOR RIVERS:

» Clean Vessel acts grants

http://www.dnr.state.mn.us/grants/recreation/clean_vessel.html

» County boats and water safety grants

http://www.dnr.state.mn.us/grants/recreation/county_boatsafety.html

» Water recreation cooperative acquisition & develop program

http://www.dnr.state.mn.us/grants/recreation/water_rec.html

» National Outdoor Recreation Legacy Partnership Program

http://www.dnr.state.mn.us/grants/recreation/national_outdoor_rec.html

» Outdoor Recreation Grant Program

http://www.dnr.state.mn.us/grants/recreation/outdoor_rec.html

» Parks and Trails Legacy Grant Program

http://www.dnr.state.mn.us/grants/recreation/pt_legacy.html

» State park road account program (SPRA)

http://www.dnr.state.mn.us/grants/recreation/parkroads.html

Federal Recreation Grant Programs

» Land and Water Conservation Fund (LWCF)

https://www.nps.gov/ncrc/programs/lwcf/funding.html (State level)

https://www.nps.gov/subjects/lwcf/federalside.html (Federal level)

OTHER GRANT SOURCES:

» North Face Explore Fund Grant

https://www.thenorthface.com/about-us/outdoor-exploration/explore-fund.html

» The Paddle Nation Project

http://www.cybergrants.com/pls/cybergrants/quiz.display_question?x_gm_id=4494&x_quiz_id=5170&x_order_by=1

» AETNA Foundation

https://www.aetna-foundation.org/grants-partnerships/recent-grants.html

» Patagonia Environmental Grants Program

http://www.patagonia.com/us/patagonia.go?assetid=2927&src=vty_ex0036

GRANT DATABASE SITES:

» American Rivers Blue Trails

http://www.bluetrailsguide.org/funding-resources/

Planning Goals

#1 - Establish the St. Louis River Estuary as a Nationally-Designated Water Trail

The St. Louis River Estuary is truly a unique and cherished place. The establishment of a National Water Trail designation will further the awareness of the many recreational uses, environmental and conservation steps completed and underway, and help showcase the history and evolution of the world's largest freshwater estuary. The national designation will bring added visibility and potentially added resources to the Water Trail and will help achieve the vision for the Water Trail, which is to:

» Create a more enjoyable river experience for everyone who views or uses the river

» Showcase the St. Louis River Estuary as the premier paddling experience in the Upper Midwest

» Provide a diversity of paddling experiences for a range of interest and skill levels

» Expand outdoor recreation as an economic development strategy for the Twin Ports region

#2 - Develop Strategies to Strengthen Best Management Practices

As the evolution of the Water Trail continues, reinforcing the best management practices identified in this Master Plan surrounding recreation, education, restoration and conservation, maintenance, and public information and support. Resources are limited and strategic steps for implementation are critical. Just as critical, is the strong support of a diverse array of partners to achieve the vision and mission of the Master Plan. Key strategies moving forward include:

» Continue to develop strong partnerships between agencies and local government, nonprofit organizations, and private operations with specific interests in the Water Trail. This will leverage additional financial resources and staffing for implementation, management and maintenance.

» Leverage existing assets. Continuing to build-on and improve existing facilities will focus efforts and allow smaller injections of capital dollars to make larger impacts. For example, creating dedicated non-motorized launches at existing facilities will alleviate congestion at the motorized launch and allow other aspects to be shared including parking, restrooms, etc.

» Plan for strategic investments that will have the greatest benefit for furthering the Water Trail. This will allow for more focused fund rasing efforts and targeted support through annual budgeting and grant pursuits.

» Provide an annual evaluation of the Water Trail condition and usage by:

- Developing metrics for monitoring use of facilities.
- Developing a condition assessment reporting mechanism to be utilized by the management organization.

PARTNERSHIP STRATEGIES

The long-term sustainability of the Water Trail depends heavily on the establishment of strong partnerships. The master planning effort has identified over 60 potential partners in the St. Louis River Watershed alone, all with the potential capacity to assist in continued planning and implementation, marketing and promotional aspects, and on-going maintenance and stewardship of the Water Trail.

Planning the Water Trail presents a potential challenge not commonly found with many river communities seeking National Water Designation. Because Duluth and Superior are located in separate states they answer to state regulatory authorities that differ to some degree on public lands management, river management, hunting, fishing, and boating laws and so forth. Further, the funding cycles between the two states differ creating some challenges for implementation. However, working collectively to secure grants and other funding, the two communities will appear stronger.

#3 - Create a Step-by-Step Implementation Plan for the St. Louis River Estuary Water Trail

The Master Plan outlines three key steps for implementation for the Water Trail. The first phase (anticipated to occur in the first 1-2 years) focuses primarily on formalizing a leadership partnership group, creating public information avenues for developing a website, social media outlets, news releases, and hosting a kick-off event. The second phase would focus on low-cost capital investments such as creating designated paddling launches at existing public access points and the creation of new land sites such as campsites, rest stops, and portages. The third phase would target larger capital expenditures and would be determined by available funding. The available funds would likely be from a combination of increased funds from government partners, leveraging grant dollars, and in-kind dollars from voluntary efforts of supporting nonprofit (e.g. Northland Paddlers Alliance, St. Louis River Alliance). Table 2.5 summarizes the implementation strategy based on the above time frames and anticipated allocation of dollars (represented as $ = low, $$ = modest, $$$ = higher cost actions).

TABLE 2.5 - IMPLEMENTATION PLAN MATRIX FOR THE ST LOUIS RIVER ESTUARY WATER TRAIL

Phase I $ 1-2 Years Initial Investments	Phase II $-$$ 3-5 Years Incremental Growth & Monitoring	Phase III $$ - $$$ 5+ years Long-term, Strategic Investments
Organize a collaborative river management team comprised of the respective inter-agencies and user groups from both sides of the river	Develop a monitoring and reporting mechanism to document water trail usage to support maintenance needs and plan for future investments	Other potential physical improvements such as upgrades to the Perch Lake water access
Prepare and submit a step-by-step plan that meets or exceeds the criteria for National Water Trail designation		
Develop river usage policies that help minimize impact at water access locations such as the creation and promotion of an adopt-a-site program; potentially revamp the City of Duluth's current Adopt-a-Spot program to include launches as a part of the program	Evaluate the ability for a dedicated launch for paddlers at existing public boat launch facilities such as Boy Scout Landing, Munger Landing, Arrowhead Pier, and Billings Park & 21st Launch	Initial investments in a Water Trail paddle center currently supported by the City of Duluth
Promote greater public awareness about the benefits of the St. Louis River Estuary and come to view the sister cities of Duluth and Superior as premiere paddling and boating communities • Develop a Water Trail website and integrate with Visit Duluth. Conversations are currently taking place for Visit Duluth to host a broader spectrum of outdoor recreation information on their website, and the information for the Water Trail would be a component of this • Create Water Trail maps and guide books and distribute to recreation providers, Visit Duluth and the Douglas County Visitor Bureau, the MN & WI DNR, and the City of Duluth and Superior • Implement a signage and wayfinding system	Phase 1 - Define a standard of river mileage access based on increased tourism and amenity hubs - criteria for river access points what areas should be shared, dedicated non-motorized, and carry in access.	Development of additional put-ins, rest stops, portages and campsites on the Wisconsin side of the river in the Pokegama State Natural Area
Enhance river recreation and education opportunities that will contribute to the public's better quality of life		
Submit the formal National Water Trail Application to the National Parks Service		
Develop river usage policies that benefit all user groups and help minimize potential river user group conflicts		
Promote and enhance river restoration and preservation efforts		
Define a standard of river mileage access criteria based on a tiered level of investment (Primary, Secondary, etc.) that responds to anticipated tourism/ amenity hubs, existing water access point usage, and physical site constraints. The criteria for river access points will help determine areas should be shared, dedicated non-motorized, and carry in access.		
Develop a financial plan that leverages both tax and grant revenue as well as utilizing in-kind dollars from volunteer group efforts		
Development of the Lower Spirit Recreation Area (Tallas Island)		