



Milwaukee Urban Water Trail

Gap Analysis Study

A Report on Improving Existing Water Access
and Closing the Gaps Along 25 Miles of Water Trail

Friends of Milwaukee's Rivers



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1. Milwaukee Urban Water Trail Project: Executive Summary

Friends of Milwaukee's Rivers (FMR) is a non-profit organization dedicated to protecting water quality and wildlife habitat and advocating for sound land use in the Milwaukee, Menomonee, and Kinnickinnic River Watersheds. Friends of Milwaukee's Rivers is also a member of the Waterkeeper Alliance, an international coalition dedicated to protecting and restoring our waterways, and is the licensed Riverkeeper for Milwaukee.

FMR initiated the Milwaukee Urban Water Trail project due to the lack of readily available and publicly accessible information regarding safe and legal access points for non-motorized craft along our three rivers. The water trail currently provides more than 25 miles of paddling opportunities along the urban portions of the Milwaukee, Menomonee, and Kinnickinnic Rivers, includes 33 access sites (or portage sites), and passes through portions of 5 cities and 2 counties. The water trail map was created through a collaborative process involving FMR, various government agencies, private landowners, environmental groups, and concerned citizens. The map was released in fall 2005, and provides information on river access points as well as cultural, historical, and natural attractions along the trail. Signage has also been produced, and will be installed in early 2006

Although the Milwaukee Urban Water Trail project has reached these significant milestones, there still remains much work to be done to ensure that existing access points are as safe and user friendly as possible for paddlers, and to fill in the remaining gaps in the trail system. This report was created to provide managing agencies, landowners, and environmental/boating groups with information needed to help answer the following questions: "What are the priorities for improving existing river access?", "What are the priorities for creating new river access points?", and "How much will it cost?" To this end, this Gap Analysis Study aims to:

- Identify problems with existing trail sites;
- Provide recommendations for how to improve existing trail sites and facilities;
- Identify the remaining gaps in river access;
- Prioritize the need for new access by location and managing entities;
- Identify strategies and actions to overcome hurdles for filling the gaps; and
- Identify general funding needs and potential funding sources.

The majority of existing access sites are established launches or piers, and only need fairly modest improvements to make them more user friendly for paddlers. However, several existing access sites and portages could benefit by more significant and costly improvements. Likewise, there are significant challenges to address the funding, planning, design, and environmental issues associated with the development of new launch sites—as many of these occur in urbanized portions of the rivers where there is no "easy" fix due to physical terrain and engineered shorelines. The body of this report attempts to provide information to aid in the setting of priorities and determining feasibility for improving the Milwaukee Urban Water Trail in the future.

2. Purpose and Need for the Water Trail

When asked what they value most about the greater Milwaukee Region, people will frequently refer to the proximity to Lake Michigan or one of the area's three rivers. This is reflected in the building and redevelopment boom along Milwaukee's rivers, and in the comments of local outfitters who have witnessed the increased number of anglers and paddlers on Milwaukee's rivers. This has been brought on in part due to improved river conditions brought on by the removal of the North Avenue Dam, which has re-opened the river to fish and paddlers, and helped flush pollutants out of the previously stagnant stretches of the Milwaukee River. Residents and visitors alike are increasingly using our rivers for recreational boating, and enjoying the natural, cultural, and historical attractions that can be discovered from the water.

However, there has been a growing gap between the increasing interest in boating, fishing, and other forms of riverfront recreation in Milwaukee, and the access information that has been available to users. While some people clearly know how to gain access to the Milwaukee River, this information has been primarily passed along by word of mouth rather than by any readily available public source, and information on the other two rivers, the Kinnickinnic and the Menomonee, has been virtually non-existent. The lack of public information on legitimate access points has led people in the past to use makeshift, and at times illegal, unsafe access points. Problems with these "unofficial" access points include: trespassing on private property; unsafe boat launching points and portages; inadequate or inappropriate parking; and damage to sensitive shorelines. There was also very little information easily and readily available for local paddlers on trip planning, water safety, and natural, cultural, and historical features along our three rivers. Due to these reasons, FMR decided to develop the Milwaukee Urban Water Trail program.

The Milwaukee Urban Water Trail map was finished in fall 2005. The water trail currently provides more than 25 miles of paddling opportunities along the urban portions of the Milwaukee, Menomonee, and Kinnickinnic Rivers, includes 33 access sites (or portage sites), as well as information on natural, cultural, and historical features, trip planning, water levels and hazards, and general safety tips. The map is available to the public both as a free paper map, as well as digitally on the Friends of Milwaukee's Rivers website at: www.mkeriverkeeper.org/watertrail. Water trail paper maps are available at the Milwaukee Environmental Consortium, local riverfront businesses, public offices, universities, tourism agencies, nature centers, etc. Water trail signs have also been developed and produced using a logo developed by a student at the Milwaukee Institute of Art and Design, and will be installed in early 2006. FMR hopes that the water trail maps and signage will go a long way to addressing the need for publicly available and easily accessible information on existing safe and legal access points.

The intent of this gap analysis is to provide information on how to physically improve and enhance existing water access sites and associated facilities, as well as to prioritize sites for the development of new access sites and facilities within the project area of the Milwaukee Urban Water Trail (see Appendix A). The gap analysis will also provide

limited information on how much the development of sites could cost in general terms, as well as provide information on how to address other hurdles (regulatory, institutional, physical terrain constraints, etc.) to filling in the gaps along the water trail. The recommendations included in this report are meant to serve as a starting point; managing agencies, landowners, and interest groups are encouraged to utilize and build on the information provided in this gap analysis.

3. Benefits of the Milwaukee Urban Water Trail

The concept of a water trail is a new one to many people. Unlike a hiking or bicycling trail, water trail advocates do not need to acquire land or invest in landscape improvements. The ‘trail’ gives people the tools and knowledge to access the rivers that are already there, waiting for them. Essentially, water trails are liquid “pathways” that are being developed in communities across the country. They enable non-motorized boaters to find legal access points, resting sites, and nearby cultural, historical, and natural attractions. Water trails connect people with places, both natural and human-made, connect past to present, and bring the boater into contact with the rivers and surrounding lands. These connections help provide a “sense of place” within our watersheds, promote stewardship, and bring us together as a community.

The Milwaukee Urban Water Trail is a great benefit to the local Milwaukee community. The water trail builds on a series of efforts to bring life back to the rivers of the greater Milwaukee area by improving river access, water quality, and wildlife habitat. The underlying goal of the water trail is to encourage people to enjoy their rivers in a responsible way. Since the map has been released and the water trail has received some good press, people are increasingly realizing that they don’t need to travel long distances to go canoeing or kayaking, but can enjoy the rivers right in their own backyards. The benefits of the Milwaukee Urban Water Trail include improved:

- Recreational opportunities and access to rivers and adjoining riparian corridors, parks, and open space;
- Stewardship and protection of our natural resources;
- Community health and safety; and
- Economic vitality and transportation.

3.1 Recreational Opportunities and Access

While an urban river outing is certainly not the same as a wilderness experience, it has the opportunity to serve significantly more people. The Milwaukee area has 20% of the state’s population or nearly one million people. Many people do not have the means to travel long distances for holiday. And even those that do have the means to travel need quality opportunities for outings that they can enjoy in a



FMR’s 2nd Annual Canoes and Brews, 2005.
(Photo: Eddee Daniel)

day off work, or a Saturday afternoon between weekend chores. The Milwaukee Urban Water Trail gives quick and easy access to Milwaukee’s three rivers so residents and visitors can explore the city by water on a whim if they choose. The FMR website also includes information on where people can rent canoes and kayaks locally, as well as provides more in-depth information on trip planning.

“We are proud to be a part of this exciting new opportunity to explore Milwaukee County,” said Milwaukee County Executive Scott Walker. “Many Milwaukee County parks will serve as access points for this trail and this is another great way for residents and visitors to enjoy our ‘emerald necklace’ of parks,” said Walker.

It was not so long ago that the rivers were so polluted that we turned our backs on them. As water quality has improved and building and redevelopment along our riverfronts has surged, river access has improved and there has been increased interest in recreation. In Milwaukee, the creation of the RiverWalk has allowed much greater access to the river for people wishing to walk along the river, or perhaps fish along its banks. The city of Milwaukee has many public boat launches that are used by motorized boats, but many paddlers did not use these piers or know if they were authorized to do so. The same can be said of boat launches in other municipalities (Mequon, Thiensville, etc.). Municipalities are slowly understanding that there is a difference between what motorized boats need, and what paddlers need for safe launching. A prime example is Thiensville, which recently put in their first designated launch for non-motorized use (the Molyneaux Launch).

In recent years, private piers and boat slips have also proliferated along our rivers—many of which are affiliated with condo developments and riverfront businesses. While some of these piers were designated as “public” either due to good will, regulatory issues, or because public funding was used in their creation, the public was not using these piers due to the perception that they were “private”. Increasing development along our rivers has also made it more difficult to find public launches from the land. The Milwaukee Urban Water Trail provides trail users with information on what launches are available to the general public and minimizes confusion about how to access our rivers. In addition, several new water access sites were identified and authorized for public use as part of this project, including piers at several local businesses, and natural launches in the City of Glendale, Shorewood, and Milwaukee County Parks.

The Milwaukee Urban Water Trail has helped many residents and visitors discover our three rivers as a major recreational resource. The trail also provides tremendous opportunity to improve access through connector trails such as the Lake Michigan Water Trail, which provides access along the shoreline of Lake Michigan in Illinois and Wisconsin, as well as to the Milwaukee County Parks Oak Leaf Trail, Hank Aaron State Trail, and the newly created Beer Line Trail, which all provide quality hiking and biking opportunities that can be combined with a paddle trip. The water trail also provides tremendous opportunity to connect many residents to the rivers in communities such as Mequon, River Hills, and Glendale that lie close to the rivers, but have often been

historically “cut off” from large sections of the river due to private land ownership and a fear of trespassing over private property. Similarly, many communities along the Menomonee and Kinnickinnic Rivers have been historically cut-off from the rivers due to private land ownership and industrial activities. This is slowly changing on both rivers, with a small number of “public” sites now designated on the Kinnickinnic River as part of the water trail, and plans already afoot for creating several access sites along the Menomonee River in the next few years.

3.2 Stewardship and Protection of our Natural Resources

The underlying goal of the water trail project is to encourage responsible use of our rivers, to connect people with our rivers, and to inspire stewardship of our natural resources. Many people drive over our rivers every day, and don’t even realize that they are there. In addition, most people don’t realize that our rivers are affected by all the land use and activities on the land within the watershed. Once someone has had an experience paddling in the river “up close and personal”, they are more likely to help us protect it either through advocacy or participation in river clean-up or restoration events. The water trail provides a great benefit to the local community by “connecting” residents with their rivers.



Paddlers remove shopping cart (Photo: Eddee Daniel)

Many of the water trail access points are located in park land managed by Milwaukee County Parks, Shorewood, Mequon, Glendale, and Thiensville. Although many people have used these parks in the past to launch their boats, there was confusion over where exactly were “official” launch sites. In many areas of the Milwaukee County Parks in particular, the lack of “official” designation of launch sites has led recreational users to plop their boats in anywhere along the shorelines. This has led to resource damage in many areas of the parks. Through the process of developing this trail, Milwaukee County Parks “officially” designated launch sites, and is installing signage to designate these sites. This should confine foot traffic to designated areas, thus protecting many of the natural shorelines from degradation and erosion. It is important to protect the health of our parks and rivers to ensure the long-term viability of the trail, because increasing interest in river recreation is a testament to the improving health of our rivers.

“Due to improving water quality and river restoration projects such as the removal of the North Avenue Dam, which re-opened the river to fish and paddlers alike, interest in recreating on our local rivers is at an all time high” said Sharon Gayan, Milwaukee River Basin Team Leader for the Wisconsin DNR. “The Milwaukee Urban Water Trail serves a vital need in our community.”

The water trail also provides users with excellent opportunities for enjoying the beautiful scenic backdrops provided by the natural river corridors and parks along the trail route, as

well as opportunities for bird watching and wildlife viewing. The water trail also provides easy access for fishermen to enjoy our improving local fisheries.

3.3. Community Health and Safety

Studies by the National Institutes of Health and others increasingly point to our sedentary lifestyle and a primary reason for obesity and associated health problems. The water trail provides an important resource for residents to start, supplement, and maintain an active lifestyle within a developed area. The Milwaukee Urban Water Trail is unique in that it flows through dense urban development, suburban residential neighborhoods, employment centers, schools, and parks, and provides an excellent recreational experience. Trail users can enjoy the changing scenery ranging from natural forested riparian corridors to the urban seawall canyons of downtown Milwaukee to the open expanse of the Milwaukee River Estuary. All of these elements make the water trail an excellent tool for encouraging area residents to exercise, especially residents that can't afford expensive gyms or trips. Local nature centers, universities, and businesses such as Laacke and Joys offer low-cost rental options for those without their own canoes and kayaks.

“This water trail gives quick and easy access to Milwaukee’s three rivers so residents and visitors can explore the city by water on a whim if they choose. Making river access so readily available in the heart of Milwaukee will encourage people who don’t have means and/or desire to make more remote river trips grab a paddle and go,” said Angie Tornes of the National Park Service.

The maps also identify areas of safety concern such as rapids and other potentially dangerous stretches of river where there are dams or natural falls that need to be portaged, as well as areas of heavy motor boat traffic where paddlers need to take special



Kayaker at Estabrook Falls (Photo: Eddee Daniel)

precautions. As a result of this project, safety signage has been installed upstream of Estabrook Dam to alert paddlers to safety issues associated with that dam, and signage at other hazards such as Kletzsch Falls and Estabrook Falls will be installed in early spring 2006. Other areas of concern, such as the dam in Thiensville Village Park, were already sufficiently signed. The water trail map also provides information on other areas where increased skill is needed to pass obstacles, such as the prior Schlitz Brewery Ice Dam and the

North Avenue Rapids. The former site will have an “optional” portage for use in high and fast flowing water or for inexperienced paddlers not wanting to pass through the rapids. Before the water trail map was published, there was no readily available source of information on safety hazards present on our three rivers, and few plans to address them.

3.4 Economic Vitality and Transportation

The Milwaukee Urban Water Trail advances the goals of many past reports such as the Milwaukee River Revitalization Council's Riverway Plan by promoting the Milwaukee Riverwalk district and existing businesses, recreational trails, and access points along the Milwaukee River. Promoting river access in the urban areas will also serve to enhance and expand the experiences available to visitors and tourists. We anticipate that the water trail will result in business opportunities for outfitters, riverfront businesses, and other vendors who will be able to cater to new demands in the future. Maps have already been distributed to many riverfront businesses, nature centers, agencies, tourism centers, and municipalities and have been greatly received. At a minimum, we certainly expect that local environmental groups, agencies, and municipalities can use this resource to promote new recreational opportunities to the public they serve. Projects like the Milwaukee Urban Water Trail are the key components that make the Milwaukee area "livable" and attractive places to live, work, and set up a business.



Rockbottom Brewery and RiverWalk
(Photo: Milwaukee DCD)

"Projects like the Milwaukee Urban Water Trail that promote tourism and urban recreation will have a positive impact on the local economy, and Milwaukee's ability to attract and retain new residents" said Milwaukee's Mayor, Tom Barrett.

While the Milwaukee Urban Water Trail serves primarily a "recreation" function, it may also serve as an important transportation function one day. While the trail is being currently used by many boaters who use the rivers to travel to their favorite restaurant or riverfront business, one day it is not inconceivable that we might have "paddle to work" commuters, especially since an increasing number of residents live in new condo developments along the rivers with quick and easy water access!

4. The Milwaukee Urban Water Trail: A Collaborative Process

4.1 Trail Development

The Milwaukee Urban Water Trail was developed over a 1.5 year period by an advisory committee that included representatives from a broad range of interests including Federal, State, County, and local government agencies, environmental and recreational organizations, private business owners, and interested individuals. The process mirrored that of other successful water trails across the country, and extensive technical assistance was provided by the National Park Service, Rivers and Trails program. In total over 9 meetings were organized with the advisory committee. In the beginning, advisory committee members helped define the goals of the project, the scope of the trail, and the level of detail of what to include in the access site evaluations (see Section 5) and

ultimately, in the map. Aerial maps of the selected project area were created and several collaborative mapping sessions were held to pinpoint areas currently being used for river access and areas of desirable access. Advisory committee members also helped to fill out access site evaluations for potential water trail launch sites. These evaluations were also available on our website and members of the general public were encouraged to submit them. A good attempt was made to send these evaluations to members of local boating groups that were most likely to comment. Recommendations from these evaluations were largely used for the subsequent parts of this gap analysis.

Landowner Contacts

All landowners of either existing or desired access points were contacted about participating in the trail, and were provided information on the project, FMR, liability, WI recreational use statutes, etc. Follow up calls were made by FMR staff to either receive permission on the phone or to set up additional meetings to discuss concerns, constraints, and opportunities. Through this process, we were able to garner support from 5 cities, 1 county, and multiple private landowners for 33 access sites (see Appendix C). Only 4 landowners refused to be part of the trail: one was concerned about liability; two were in the process of selling their property, but were supportive and interested in potential inclusion in the future; and one was in the process of reconstructing his business and felt the timing was wrong.

Government Partnerships

FMR and the advisory committee also worked with government entities to ensure inclusion of public access sites in the trail. The cities of Milwaukee, Glendale, Shorewood, Mequon, and Thiensville were contacted about inclusion of their public sites. Glendale agreed to add one additional site at River Forest Drive; and Shorewood agreed to allow access to a site that was formerly prohibited to use at Hubbard Park (without permission of the police). We worked with Milwaukee County Parks to “officially designate” water trail sites in the Milwaukee County Parks, and these sites were presented to the Parks Committee of the Milwaukee County Board. Because these sites have now been officially designated by the Parks Director, the water trail sites are now “in line” with the Milwaukee County Access Ordinance and confusion and resource damage will be minimized. No easements were required for this project, but several municipalities changed their policies to enable participation in the water trail project.

FMR also worked closely with the Wisconsin Department of Natural Resources (DNR) to identify piers that were permitted to be “public” based on state regulations calling for piers above and beyond “reasonable use” (basically two piers for the first 50 feet and one pier for each additional 50 feet) to be opened up for public use. DNR staff served as members of the advisory committee, and helped find solutions to several safety concerns such as lack of signage upstream of dams and drop structures, as well as development of language for the maps to convey the hazards associated with contaminated sediments along several stretches of the water trail.

Non-Profit Partnerships

Many members of the advisory committee are members of local non-profit organizations working on their own projects relating to the water trail and were included to maximize the synergies among these efforts. These members include: Menomonee Valley Partners, who is currently planning for up to 3 river access points along the Menomonee River upstream of the current project area; Sixteenth Street Community Health Center, who is actively organizing local communities around the Kinnickinnic River to become more active in river stewardship activities and in their community in general; and River Revitalization Foundation, who is an urban land trust protecting land along the rivers for access trails, and recently acquired land along the Milwaukee River for the Beerline Bike Trail. These organizations were all helpful with landowner contacts and ideas for existing and potential access sites as well as nearby cultural, historical, and natural amenities to include. Urban Ecology Center and Schlitz Audubon Nature Center both manage river access sites, and conduct regular river trips—they were both a great resource on the advisory committee as well.

The Logo/Branding

The advisory committee members were also intensely involved in the process of selecting a water trail logo, which is used on all publications such as the map and press releases as well as on the signage. The committee decided to work with the Milwaukee Institute of Art and Design Visual Resources Class on developing a logo. Over 25 designs were created by the students and eventually narrowed down to one winning logo—with slight modifications requested by the group. Although this was a fairly laborious process, committee members were generally pleased with the collaborative process and the final logo choice.



The Water Trail Map

The committee was also involved in reviewing the draft text for the water trail map product, and in reviewing different iterations of the cartographic map as it was being developed by both our local partners at PDI Site Engineering, who helped us with the initial mapping of access sites and compiling all the digital layers for our map product, and by Map Hero, who was our overall graphic designer. DNR staff also helped with procurement of GIS layers needed for the project as well as technical assistance with establishing locations of access sites on the maps and distances between access sites. National Park Service staff also provided significant technical support with creation and development of the map product based on their experience with other water trail projects across the country.



Advisory committee members also helped identify grant opportunities to fund the printing of the water trail maps and signs, as well as to support the overall planning and implementation of the trail. Most committee members are also actively promoting the

trail, and distributing maps at their places of businesses and to other interested parties, and anticipated to help with sign installation.

These agency, organizational, business, and personal partnerships provided great ideas, viewpoints, recommendations, and strategies for creation of the Milwaukee Urban Water Trail, amidst an environment of complex property ownership, land use, regulatory restrictions, municipal ordinances, and government bureaucracy.

4.2 The Partners

Although it would be difficult to list all the partner relationships developed in creation of the Milwaukee Urban Water Trail, the core advisory committee is listed below:

- National Parks Service Rivers and Trails Program
- Wisconsin Department of Natural Resources
- Milwaukee County Parks
- Milwaukee Department of City Development
- PDI Site Engineering
- Menomonee Valley Partners
- Pier Milwaukee LLC
- River Revitalization Foundation
- Rob Smage of American Whitewater
- Schlitz Audubon Nature Center
- Sixteenth Street Community Health Center
- Urban Ecology Center
- John Mulhern, Glendale Resident and Paddler

4.3 The Funders

The Milwaukee Urban Water Trail would not have been possible without the generous support of our funders and friends. Likewise, significant funding will be needed to improve the water trail in the future and close the gaps. Funders include:

- Wisconsin Coastal Management Program
- National Oceanic and Atmospheric Administration
- Wisconsin Department of Natural Resources
- Milwaukee River Revitalization Council
- Wisconsin Energy Foundation
- Bert L. and Patricia S. Steigleder Charitable Trust
- American Canoe Association/LL Bean
- Badger State Boating Society
- Milwaukee RiverWalk District
- Historic Third Ward Association
- Hundreds of individual FMR supporters

In addition, significant in-kind support was provided by Rivers, Trails, and Conservation Assistance Program of the National Park Service, WDNR, Milwaukee County Parks, Milwaukee Department of City Development, and PDI Site Engineering.

4.4 Public Awareness/Media Coverage

From the beginning, the Milwaukee Urban Water Trail project has slowly gained public awareness in part through earned media coverage in local print publications and local public radio. In fall 2004, FMR ran a cover article about the water trail and the Federal funding support that we received via the Wisconsin Coastal Management Program administered by the State Department of Administration. The water trail was included in the fall/winter Outpost Exchange Magazine's sixth annual Natural Choice Directory that promotes individuals, organizations, and businesses promoting conscious living. In spring 2005, the Shepherd Express ran a feature article entitled "Water Trail Takes Shape—Groups Work to Open Rivers to Paddlers." The July 21, 2005 edition of the MKE Newspaper ran a multi-page article entitled "Go with the flow", where the water trail was mentioned along with local groups providing canoeing excursions down the Milwaukee River.

FMR officially held a press conference on September 16, 2005 to launch the water trail and distribute maps. On that morning, a 10 minute interview with the FMR Project Director was ran on local public radio station WUWM. The press conference included the Mayor of Milwaukee, Tom Barrett, as well as State Representative Jon Richards, and representatives from the Wisconsin Coastal Management Program, FMR, and the National Park Service.



Milwaukee Mayor Barrett at the Water Trail Press Conference (Photo: FMR)

Although there was unfortunately no television coverage, the Milwaukee Journal Sentinel ran an article about the water trail in their "Take Five" Section, which featured an interview with FMR's Executive Director. An article about the water trail was also featured in the We Energies Corporation newsletter, which goes out to all We Energies employees. The BayViewer Newspaper did an excellent cover article on the water trail entitled "Smooth Ride", which highlighted river routes as an alternative to traffic. The FMR Project Director as well as the Urban Ecology Center's Urban Adventure Coordinator were filmed for a 30 minute segment on the water trail and canoeing Milwaukee's Rivers, which will hopefully air in spring 2006 on Milwaukee Public Television's Outdoor Wisconsin program. The water trail was also featured in a Special 2005 Water Trails Supplement publication from the publishers of Paddler Magazine.

The water trail has also been recently nominated for two local awards. The water trail was nominated for the City of Milwaukee Mayor's Urban Design Awards under the "connecting places" category. The water trail was also nominated for a National

Recreation Trail designation by the National Park Service. The trail was nominated by the FMR Project Manager and Milwaukee County Parks Trails Coordinator, and received a strong letter of support from the Wisconsin DNR's State Trails Coordinator. If the trail is selected for designation, it will be highlighted nationally on National Trails Day.

5.0 Existing Access Site Conditions and Recommendations

This section of the Gap Analysis provides information on the present condition of water access sites, including related amenities, as well as recommendations for how these sites can be improved to be more “user-friendly” for paddlers. These recommendations can be used by governments, land managers, advocates, and businesses to take the water trail to the next level. Again, these recommendations are meant to be a *starting point*. Although ultimately the overall goal of a water trail program would be improve existing access points through better design and retrofits to make sites easier to use by non-motorized craft (as well as to inspire general improvements in access sites and facilities at all sites), we realize that in most cases, improvements will be “opportunity” driven and will depend on procuring funding sources. Despite these limitations, it is still appropriate to “dream big.”

5.1 Existing Paddling Conditions

Milwaukee's rivers present both opportunities and challenges for the canoeist or kayaker. Opportunities include: beautiful scenic backdrops; excellent wildlife watching; easy access to downtown businesses theaters, and museums; a fun way to exercise; interesting observations of our “working” rivers--industrial/commercial activities; an alternative way to travel; and an “urban” wilderness experience right in our own backyards. Challenges include constantly changing water levels; currents and wind; limited facilities for paddlers; avoiding potential hazards (dams, natural falls, motorized boat traffic, etc.); enjoying the paddling experience despite high levels of floatable trash in certain areas; and minimizing degradation of the natural resources that paddlers are coming to enjoy.

Water Levels

Milwaukee's rivers are an interesting and exciting place to paddle. Many areas of the Milwaukee River upstream of North Avenue and the Kinnickinnic River upstream of Becher St. can become very shallow during certain times of the year, with multitudes of exposed rocks and the occasional tire or shopping cart. Shallow, rocky water can also be a challenge for putting-in and taking-out without getting wet in many areas—most notably downstream of Kletzsch Falls and the Estabrook Dam. It is also an interesting and sometimes difficult experience to paddle on areas of our rivers that are maintained as deep channels by the Army Corps of Engineers. This would include most of the Milwaukee River Estuary, which includes the Milwaukee River until North Avenue, the Kinnickinnic River until Chase Avenue, and the Menomonee River until approximately 25th Street. In many of these areas, when the wind is coming from the lake, it can feel like “paddling through molasses”! Based on the surge of the tidal seiche from Lake Michigan into the mouth of the rivers and the wind speed and direction, a paddler going downstream might feel more like they are paddling upstream against the current.

It is also of note that lower water levels on Lake Michigan have also caused many of the rivers to have lower water levels. This is especially apparent along the Milwaukee RiverWalk and areas closer to Lake Michigan, where stairs used to descend down to the water and are now left “high and dry”. Luckily, most of the new piers and associated ramps are “floatable” and adjust with changing water levels; however, this has posed problems with many piers in the City that are no longer “ADA accessible” because the floatable ramps are at grades that are too steep to be safely traversed by those in wheelchairs.



Steps to nowhere at Pere Marquette Park
(Photo: FMR)

Hazards

It is also worth noting that several hazards exist within the project area, including the Thiensville Dam, Kletzsch Park Falls and Estabrook Dam (both created by the Workers Progress Administration), the old Schlitz Brewery Ice Dam, and the old North Avenue Dam. These hazards have been marked on the map, and one of the water trail successes has been to apply pressure to ensure that these remaining hazards are signed either by managing entities (as has happened already at Estabrook Dam) or signed by FMR through the process of installing signs for the water trail project itself. It is noteworthy that “natural” obstacles are not required by the DNR to be signed by landowners--only “artificial” obstacles such as a dam or human-made obstacle are required to have safety signage.

Other hazards include considerable motorized boat traffic especially in the Milwaukee River Estuary area. Motorized boat traffic can pose a significant safety concern to paddlers. Safety is also further affected by the increasing proliferation of piers, especially on the Milwaukee and Kinnickinnic Rivers. As piers jut out from both shorelines, paddlers are increasingly pushed into the centers of the rivers and into closer proximity with large boats and barges. A large part of this water trail has been to advocate for not only inclusion of publicly accessible piers as development and redevelopment occurs, but to advocate for “escape routes” (e.g. open side channels under bridges) and safety considerations for non-motorized users.

Garbage can also serve as a hazard in addition to an aesthetic “challenge”. FMR works hard though our continual river clean-ups and in combination with public agencies such as the DNR and the Milwaukee Metropolitan Sewerage District to keep our rivers clear of obstacles to navigability. Although, inevitably, new shopping carts, logs, and other debris enter our rivers each day, and pose a safety concern. In addition, other areas that tend to accumulate debris can be difficult to paddle through at times; most notably, the Burnham Canal (sunken debris, rebar, etc.), the Kinnickinnic River upstream of Chase Avenue, upstream of the debris catchers or “sharks teeth” of the Estabrook Dam, and portions of the Milwaukee River and Lincoln Creek in Lincoln Park. In addition, the portion of the Milwaukee River upstream of Estabrook Dam, including the river

branches and creeks in Lincoln Park, are contaminated with PCBs. A cautionary statement was added to the maps to discourage paddlers from making contact with sediments at this location, and signage on PCBs and fish consumption advisories have been installed on land at this location as well as other areas of concern by the Milwaukee Department of Health and DNR.

5.2 Access Site Evaluation Process

At one of the first Advisory Committee meetings, members discussed the types of evaluation criteria that would be used to determine inclusion of water access sites for the Milwaukee Urban Water Trail. FMR staff looked at examples of access site checklists and evaluation forms from other water trails throughout the country and compiled a long list of criteria for consideration. In addition to identifying information such as the name and contact information for the person conducting the inventory and location of the site, the following criteria were evaluated for each site:

- Ownership—name of government agency, organization, business, landowner, etc.;
- Type—hand carried, non-motorized sites, water access only sites, or motorized boat launch;
- Conditions—high dock/pier or seawall, low dock/pier or seawall, floating dock/pier, motorized boat ramp, sandy shore, muddy shore, gravel or rocky shore, vegetated/natural shore, concrete steps/retaining wall, etc.;
- Parking—ample parking, no parking, less than 10 spaces available, water access only, street parking, parking garage, etc.;
- Restrooms—flush toilets available, no sanitary facilities, port-a-potty type of device, and public restrooms within walking distance;
- Other on-site or nearby facilities—restaurants, potable water, paddling supplies, public phones, picnic areas, etc.;
- Paddling points of interest—hiking trails, places to visit, fun paddling excursions, etc.;
- Ecological, cultural, or historical sites—unique natural features, parks, trails, museums, performing arts centers, historic sites, etc.;
- Hazards to river access—current, logs, variable water levels, dams, drop structures, natural falls, etc.;
- Signage—adequate signage, no signage, take-out/put-in obvious from the river, etc.;
- ADA accessibility—take-out/put-in accessible for the handicapped, not accessible, other accessible facilities exist (parking, restrooms, etc.), etc.; and
- Recommended improvements to access site, portage, parking, and signage.

A copy of the Access Site Evaluation form used is included in Appendix B. Much of the information from factors evaluated such as paddling points of interest, other on-site facilities, restrooms, parking, and nearby ecological, cultural, and historical sites were incorporated into the water trail map, and will not be discussed in this gap analysis unless improvements are recommended. Factors considered for evaluation and ruled out by the

committee included: water quality, on-site access to launch, lighting, security, unloading areas, waste disposal sites, and water sources. Many of these factors were considered in determining overall recommended improvements for a site, but were not systematically considered at each site. Due to the urban nature of most of the water trail, and the large number of access sites and nearby facilities, the Committee felt that these factors were less crucial for determining sites to be included in the water trail. The evaluation of access sites is admittedly somewhat subjective; however, the Committee tried to evaluate factors that would be applicable to most sites and a variety of users.

Two different mapping exercises were conducted by the Advisory Committee and all potential river access sites were mapped, numbering approximately 40 sites. As noted earlier, landowners of each of the potential sites were contacted for potential inclusion in the water trail. Each of these potential sites was also evaluated by FMR staff, members of the Advisory Committee, or by FMR members or local paddlers. Not all evaluated sites made it onto the water trail map. Some landowners decided that they did not want to be included (e.g. Hilton Milwaukee River, Southwind Marine), others were in the process of selling their land (e.g. Melanec's Wheelhouse, Hometown Gas property), and others were not included due to difficulty of use (e.g. Chambers Ave/Pump Station Park), safety concerns, current construction activities (e.g. Petit Point, Lakeshore State Park, Harborfront Condominiums, US Bank/Chase pier), or close proximity to better established or more useable sites (e.g. US Bank/Chase pier, Fiddleheads in Thiensville). Some of these sites could be potentially added in the future as conditions change.

Following are descriptions of existing water trail access sites using information from the access site evaluations, as well as recommendations on how they can be improved. Information on site amenities is listed on the water trail map itself. For the sake of space, sites will be grouped according to category where possible. Access site evaluation forms are not included as part of this report, but are available upon request. In addition, a copy of the water trail map and site evaluation is available for download on the FMR website at: www.mkeriverkeeper.org/watertrail. FMR will continue to solicit and collect evaluation forms from anyone who would like to fill one out. These forms will be used in the future to help improve the existing access sites and identify new ones.

5.3 Evaluation of Existing Boat Piers

As the paddler gets closer to downtown Milwaukee, there are many docks or piers. However, in the past, it was very confusing for paddlers to know which piers were publicly available and which piers were private. Many of the public piers have been historically not signed for public use. In fall of 2006, the City of Milwaukee and RiverWalk Business Improvement District conducted an extensive RiverWalk signage program between Juneau and Clybourne Avenues in downtown Milwaukee. However, uniform signage still does not exist in the areas outside of this core area. In addition, many new piers and boat slips associated with riverfront condominiums and businesses were required by the DNR to include public slips under certain conditions where the owners wanted more piers than was deemed "reasonable use" by State regulations. Many

of these “public” piers are also not signed and lie within a large number of private piers, making them difficult to identify or use by paddlers.

Most existing piers, with the exception of the Milwaukee Rowing Club, St. Paul Avenue/RiverWalk Park, and Waterfront Condos, were not designed with the paddleboater or non-motorized user in mind. The standard City or private dock in Milwaukee is designed to be useable to motorized boaters, and as such, is usually elevated too high from the water surface to allow for safe and user-friendly launching of canoes and kayaks. In most cases, canoeists can use these piers *very carefully*, but many of these piers are extremely difficult for use by kayakers. Likewise, most of the ramps leading down to the floating piers were not designed with the non-motorized boat user in mind, and thus can be very difficult to use. Most ramps are fairly narrow, necessitating paddlers to put their canoes and kayaks either over their heads or sideways to get down or up the ramps. In the future, these ramps should be made wider if possible to better accommodate non-motorized users.

In most cases, cleats exist for securing boats on the piers, but hand-holds for boater stabilization do not generally exist. Many existing piers could be easily retrofitted to be more user-friendly for paddlers. However, it would probably be too expensive to retrofit all existing piers, thus it might be desirable to choose several locations spaced apart that could receive improvements in the form of better hand-holds, wider ramps, “stepped down piers” or incorporation of new canoe/kayak floating launch platforms, and potentially incorporation of other amenities to cater to non-motorized users (more below).

Piers for disabled users require special design considerations, such as handrails and other features mounted on the dock to assist paddlers with entry into the boat as well as launching. There are no existing piers in the Milwaukee area that are wheelchair accessible from the water. In addition, due to declining water levels, many of the existing ramps that link boat docks/piers to the shore and were once ADA accessible (using guidelines of the Americans with Disabilities Act) from the shore, are now too steep to be safely traversed by wheelchairs. The good news is that many existing piers do have the potential to be retrofitted with features to better accommodate the disabled and older water trail users; however, it will be more difficult to retrofit existing ramps to meet ADA standards, as this would probably necessitate longer ramps and piers to accommodate the needed grade changes.

General Recommendations for designing an accessible launch (from Logical, Lasting, Launches, National Park Service Rivers and Trails Program, 2004):

- Height: Between 9” and 2’ from highest expected water level;
- Width: At least 5’ wide, preferably 6’ to 12’;
- Length: At least 25’ to allow paddlers “dry” access to entire length of their boats;
- Slope: ADA Guidelines require that slopes not exceed 8.33%; slopes exceeding 15% are difficult for any paddler;
- Support: Handrails or other support structures, including step-down designs or ropes; and
- Location: Ideally in areas without heavy flow, erosion, exposure to elements, heavy boat traffic, or fragile habitats.

A short examination of existing conditions at each pier within the Milwaukee Urban Water Trail follows below, as well as short recommendations for how each site can be improved. General recommendations for all piers include installation of water trail signage to clearly designate that piers are part of the water trail and available for public use. The ownership of each site is noted in parentheses. Appendix C includes a table of all water trail access sites listed by landowner, and the pages of the report in which they are covered.

Lincoln Park Fishing Pier (Milwaukee County Parks). This is a non-motorized, “L” shape concrete pier that was designed initially for fishing and boating. It is a low pier, and very easy to use for the most part when the Estabrook Dam downstream is closed from early spring to late fall. Since it is a stationary pier, it sometimes is under water during high flows, in which case, paddlers can launch directly from the streambank. It does pose a safety hazard during high water levels for paddlers not familiar with the area who would potentially not see a submerged pier during high water. For that reason, it may be advisable to post some signage at the end of the pier or flags that would demarcate the pier during high water conditions. On the flip side, when water levels are low due to drought or seasonally when the dam is generally open from late fall to early spring, the pier is left literally “high and dry” and becomes unusable. This is also a concern since the sediment in this area is known to be contaminated with high levels of PCBs that could pose a potential threat to human health. Generally, paddlers would have little contact with sediments during “normal” water levels, but this becomes more of a concern during low water levels. The water trail map notes that this pier is only seasonally available. Despite these limitations, the relatively short distance of flat lawn between the Milwaukee River Parkway (parking area) and fishing pier and the good stability of the concrete surface make this pier a good candidate for retrofits to make the pier ADA accessible. A short gravel path as well as installation of hand-rails would be recommended. However, due to lack of nearby “destination points” that are ADA accessible, this pier would have to be a put-in and take-out location for exploring the beauty of Lincoln Park and its rivers. The County should not invest major funding into improving this access point until there is a better idea of what the fate of the Estabrook Dam will be, as potential dam removal would drastically alter the recreational opportunities in Lincoln Park. If the concrete pier was found to need replacement, replacement with a floating, ADA accessible pier would be recommended for this location (see Appendix E).



Paddlers can access water from the pier or the streambank. (Photo: Eddee Daniel)

Milwaukee Rowing Club (Milwaukee Rowing Club). This is a hand-carried, non-motorized boat launch that is heavily used by rowers from the Milwaukee Rowing Club and Marquette University Crew Teams. It consists of one low rise

pier that is a good height for both kayak and canoe launching, and long enough (designed for rowing craft) to easily accommodate launching of multiple paddle



Rowing Club Pier (Photo: FMR)

boats at a time. However, the floating dock is made up of several hinged deck portions, which makes it a bit more mobile and less stable than other floating piers.

To accommodate the rowing vessels, there are no hand rails or other safety features on either the dock itself or the fairly steep ramp that leads down to it; however, the surfaces are not slippery and the

dock/ramp are both fairly wide and thus

more user friendly. It is also unlikely that safety features could be added without interfering with the launch of scull craft. Paddlers using this facility should be very cautious. In addition, paddlers should be considerate of other paddlers and scullers, especially crew teams that need a lot of space to maneuver their craft, and should always remember to close the gate after launching or taking out (the sliding gate is not “locked” but closed securely to deter children). Street parking is available and close to the launch site. Restrooms are available to members of the rowing club only.

Lakefront Brewery (Lakefront Brewery). This is a high floating pier, which is sometimes used by the Brew City Queen tour boat. It is difficult to use due to the height of the pier, especially for kayaks. Due to the close proximity to the Milwaukee Rowing Club, this launch is not often used by paddlers. However, this pier is convenient for those dining at the Lakefront Brewery or attending the brewery tour, and it is also a good alternative if the Rowing Club pier is busy or taken out early in the season! Street parking and parking lot are both available, although the owners request that paddlers not use the parking lots on Friday and Saturday nights. Restrooms are also available. Another positive of this launch, is that weary paddlers can get very close to the launch site at this location by driving in the parking lot; however, it is a bit awkward to get the boats down to the access points due to the existing steel posts/bollards north of the brewery that separate the parking area from the RiverWalk and launch. If this could be corrected in the future in combination with any repairs or renovations, the launch would be much more user-friendly. In addition, a step-down platform could be potentially added to the end of this pier to cater to paddlers (see Appendix D).



Lakefront Brewery (Photo: FMR)

Trostel Square Condos (Condo Association). The Trostel Square Condos have a series of high, floating piers, some of which are private and some of which are designated public at the request of the DNR. The two public piers are in the

center of the stub-in streets at that location with the private piers flanking the public piers to the north and south. This is the only condo that has willingly signed their public piers. Signs state “Public Access Boat Docks”, and we hope to add water trail signage at these piers as well to further delineate the public piers. The piers are a very short distance from the end of the street (convenient drop-off zone); however, paddlers must go down two short flights of stairs to reach the boat ramp, which is fairly wide and useable. Depending on which side of the street one goes down (there is a nice landscaped section at the end of the street and paths lead down from both sides), there is also a turn involved. Often there are chains that block off the lower set of stairs, but these don’t appear locked and are presumably there to discourage people on the RiverWalk from walking down to the private boats. However, the public docks must be easily accessible, so this practice should be corrected by the managing Condo Association if possible. While this pier has not been utilized by paddlers much in the past, it has potential for increased use due to the proliferation of condos along Commerce Street and Brewers Hill and development of new restaurants like Roots to cater to them. Stub-in streets make drop-off of watercraft fairly easy, and street parking is generally pretty easy in this area.



Public piers have red “public access” signs (Photo: FMR)

Ogden Realty (Peter Ogden). This is a floating, high pier, which is quite high for canoe and kayak use. The ramp down to the floating pier is fairly narrow and



Ogden Realty Pier (Photo: FMR)

there is a short turn at the top of the ramp, requiring paddlers to bring down canoes and kayaks over their head or on the side. The launch is very easily accessible at the end of the parking lot; however, the landowner prefers that paddlers drop off craft and utilize street parking. This private pier needs signage both from the road and the water to designate it as a pier that the landowner is graciously opening

up to the public for river access. This pier has not been *openly* available to the public before (although City funding was used in part for its establishment). It is unclear how many paddlers would use this site, but it is close to many restaurants, businesses, and residences in the Brady Street and Water Street areas. Improvements to make the existing pier more paddler friendly would probably be costly, and would not be the most appropriate location for such improvements.

Laacke and Joys (Laacke and Joys). This is a floating, high pier, which is L-shaped with an attached step-down wood platform for canoes and kayaks. The pier also contains an attached set of stairs (swimming pool style) that could be

used in case of tipping/swamping to get out of the water. This is a good feature, as it is a problem for paddlers to get out of the water in many areas of downtown Milwaukee with high sea walls. Some of the piers are so “high” that pulling oneself out of the water after falling out of a canoe/kayak or tipping while putting-in or taking-out is extremely difficult.

Some sections of the seawall have “rebar” stairs that could be used in an emergency, although presumably this would be difficult. Paddlers can easily access this pier from the water to go to Laacke and Joys to obtain supplies. However, it is more difficult to launch from this site from the land. The pier can be accessed from the fenced off parking lot to the north of



Laacke and Joys Pier (Photo: FMR)

the building, but this fence and adjacent building are closed after business hours. The water trail map included this information, but a paddler caught unawares could find their street access closed off and would have to take-out at an alternate access point such as Schlitz Park across the river. A sign stating that the access point is only available during business hours would be a good idea. In addition, due to the large amount of canoes and kayaks launched at this site, especially during Paddlefest and other promotional activities, Laacke and Joys might want to consider installing a commercial, step-down floating platform for paddlers as detailed in Appendix D.

Schlitz Park (Schlitz Park Leasing and Management). This is another floating pier with a short ramp that connects the pier to the parking lot of Schlitz Park.



Schlitz Park Access (Photo: FMR)

This pier is under utilized because most paddlers were not aware that it was available to the public. The ramp is a pretty good height, fairly steep, but wide and easy to use. There is a non-locking gate at the top of the ramp that needs to be opened to access the parking lot. Although paddlers could use the adjacent parking lot to quickly drop off their watercraft, they must utilize street parking as there is no

public parking in the Schlitz Park parking lot. This is a great pier though for someone needing an easy put-in or take-out location with very little portaging involved. It also could cater to the growing Brewers Hill neighborhood. This pier could also be considered for an easy upgrade to ADA accessibility through installation of hand-rails and other safety features, as well as provides ample room for the addition of a step-down commercial floating launch (Appendix D).

Pere Marquette Park (Milwaukee County Parks). Pere Marquette Park has two sets of high, long, floating piers that flank the gazebo along the riverfront. The piers to the north tend to be used by boat rental/tour companies, and the southern

or downstream pier is generally open and available to paddlers. During special summer events such as River Splash and River Rhythms concerts, the downstream pier can also be difficult to access due to a large number of motorized boats moored along the side. During such times, paddlers are better off using the next pier downstream (Plankinton Alley-Wells). The ramp at this location could also be wider, as it is difficult to fit canoes and some kayaks through the space. Of most concern at Pere Marquette are the concrete stairs leading to the water right in front of the gazebo. When water levels were higher, these stairs led right to the water and presumably would have been a good access point for paddlers, fishermen, etc. Now, the stairs are unusable to paddlers, and are generally cordoned off to the general public due to safety concerns. The stairs are also quite narrow making them difficult to use. This “problem area” also provides a good opportunity for a retrofit. Similar “stub-in” street areas managed by the City of Milwaukee, such as the Plankinton Alleys that had similar stairs, have solved the problem by pouring a larger concrete stair or platform at the bottom (for the public to use for fishing, sitting, etc.) and by putting small floating C-shaped or U-shaped piers at the bottom of these stairs. Such an approach could be taken at Pere Marquette. We would recommend that the County consider making such a pier a lower, floating pier for non-motorized craft due to the amount of high piers currently available for motorized craft. Furthermore, this might be a good pier to make ADA accessible (see Appendix E), as the parkland is already accessible. Another option might be to add a floating platform to the end of the downstream pier that would cater to paddlers (see Appendix D). There is more than sufficient space to add such a structure, and due to the heavy programming at this park, this would be an excellent location for a “pilot” project catering to the paddling community. A related feature that could be added would be a canoe locker or “canoe rack” for canoes that could be used by paddlers that wanted to lock up their boat and go to dinner or to a show, without having to worry about it floating away or being stolen!



Pere Marquette piers (Photo: Milwaukee DCD)

Plankinton Alley-Wells (City of Milwaukee). This floating pier lies at the end of an alley off Plankinton Avenue, just north of Wells Street. This U shaped or C shaped pier is a high, floating pier meant for motorized craft, but is highly useable by paddlers. Although the ramp is short, wide, and a fairly flat grade, there is a difficult turn to make and concrete stairs that must be climbed, which is a bit awkward for carrying watercraft. The alley itself is a good place for dropping off or



Plankinton Alley Access (Photo: FMR)

picking up canoes and kayaks, although long-term parking is not allowed. Paddlers could also load their watercraft on Wells Street, although this requires a short portage down the RiverWalk and going up several more small flights of stairs. It would be difficult to improve this access point, but when the ramps need to be replaced, a wider ramp would be recommended.

Rockbottom Brewery/Plankinton Alley (Rockbottom, City of Milwaukee).

There are actually two different access sites in very close proximity at this location, so they have been included as one “complex”. There is a C or U shaped



Rockbottom Access/Alley access in-between two brown buildings (Photo: FMR)

high, floating pier adjacent to the main outside dining/bar area of the Rockbottom Brewery that is available for public access. However, there are private piers both upstream and downstream of this pier, making it somewhat confusing for the public. Signage is recommended to identify the U-shaped pier for public access. This site is only suitable for water-only access, because it is too difficult to put-in or take-out within the outdoor dining area. Further

downstream and set apart by several private piers, is a public floating pier at the end of another stub-in street/alley, accessible off of Plankinton Avenue. This pier is fairly similar to the Wells Street Alley discussed above, except that there is no floating ramp. This makes the pier very difficult to use for paddlers as well as motorized boaters that need to make quite a high step to get from the floating pier to the concrete stairs leading down to the water. Either a small, WIDE, ramp would be recommended for this location—ideally, not requiring a 90 degree turn with a canoe—or another stair/platform should be added to make this pier more usable. Signage is also needed to further identify the distinction between private and public piers at this location.

Mason Street (City of Milwaukee). This pier is a larger version of the Plankinton Alley across the water. It consists of a high, floating, U or C shaped pier that is connected to the stub-in street

via a ramp and set of concrete stairs. There is very little “pier” left at the bottom of this ramp (approx. 3 feet), making it very difficult to make the turn with a canoe or kayak. This turn in combination with the fairly narrow ramp, make this a very difficult access point to use for paddlers. Again, since this access was originally designed for motorized boats, the ramps were



Mason Street Access (Photo: FMR)

designed to carry people and nothing more, and so this is understandable. The ramp is also a nice grade, and so could possibly be made ADA accessible if a

ramp was poured over part of the stairs leading down to it. However, this would also require a wider turning radius at the bottom of the ramp (requiring a larger platform) and the incorporation of protective railings, etc. This would still be difficult for disabled paddlers to use without assistance, but would allow fairly easy access to motorized boats. Similar to the Plankinton Alleys, Mason Street is a good place to drop-off or pick-up watercraft. However, street parking is often difficult to find in this area, although several parking garages are available nearby.

St. Paul Avenue/RiverWalk Park (City of Milwaukee). This pier is a fairly new, lower floating pier that was constructed in association with the new RiverWalk Park in the Third Ward at the corner of St. Paul Avenue and Water



Access is behind cantilevered RiverWalk
(Photo: FMR)

Street, as well as with the extension of the RiverWalk from Clybourne Street into the Third Ward. It is actually only accessible to paddlers, as it lies on the other side of support structures and cabling supporting the RiverWalk (see photo), which makes it somewhat awkward to use. The City of Milwaukee should be commended for incorporating this pier, which is useable by paddlers and the general public. There is also a building included as part of the park

that could potentially be used by a vendor to rent canoes/kayaks seasonally to the general public, which is an exciting prospect. However, this pier could be greatly improved with a few minor modifications to enhance its usability. The major problem is the relatively short amount of pier (approx. 3 feet) that exists at the bottom of the ramp, which makes it difficult to maneuver with a canoe when taking out or putting in and is a potential safety hazard. Taking out, paddlers must either put the canoe over their heads, or carefully “walk the canoe” to the part of the pier at end of the ramp and pass the canoe up the ramp. Putting in is about the same, but it is easiest to walk down the ramp and launch the canoe into the water, and then “walk” it around to the front of the pier for easier entry. This could be improved by physically shifting the pier structure further upstream to allow more maneuverability around the corner created by the ramp.

Buffalo Street/Milwaukee Ale House (City of Milwaukee, Ale House). Buffalo Street is a long, floating, high pier that is found at the end of Buffalo Street. This stub-in street also contains a nice, mini-park with viewing platform, connection to the RiverWalk, and an ADA accessible ramp to the RiverWalk itself. This street is nice for easy drop-off or pick-up of watercraft. Although street parking is generally difficult in the Third Ward, there are several garages in close proximity. While the ADA ramps are difficult to



Buffalo Street Access (Photo: FMR)

maneuver with a canoe, paddlers wishing to launch or take-out at this location can also make use of the vegetated terraces that lead down to the RiverWalk and pier. The biggest problem with this pier is the fairly narrow and steep ramp connecting the pier to the land, which makes it difficult to remove canoes in particular. Paddlers need to put canoes over their head or on the side. In the future, wider ramps would be more user friendly for paddlers. Adjacent to the Buffalo Street access, are a platform and several finger piers owned by the Milwaukee Ale House. These high, floating piers are also useable by non-motorized craft, but are sometimes pretty full with motor boats. Generally, paddlers can find some room at one of these two access points. Taking out or putting in at the Ale House piers is not recommended (unless during special events where the Ale House allows access through their garage); paddlers should be encouraged to use the adjacent Buffalo Street access for that purpose.

Chicago Street (Historic Third Ward Association). The Chicago Street pier consists of a short, floating, high pier at the end of Chicago Street, accessible via a fairly wide ramp from the shore. This pier is flanked on both ends by private piers, and could benefit from signage designating it as “public” and part of the water trail. Chicago Street is also a good drop-off or pick-up location for boats, and there is a public parking garage across the street. The very short portage makes it an ideal launch for those unable to portage even short distances. It is also an ideal launch for exploring the Menomonee River.



Chicago Street Pier (Photo: FMR)

Waterfront Condos (Peter Renner). As part of a permit proceeding with the DNR to obtain additional piers than allowed for by State regulation, the Waterfront Condominiums included a pier that was designated for public non-motorized access adjacent to the downstream side of the Water Street Bridge. This was a location that was largely unusable for motorized boats due to its fairly awkward location wedged against the bridge and the “dolphin” or round bollard used to protect the bridge from being damaged by potential crashes with barges, boats, etc. Because of this, the pier is not long enough for an average canoe to be moored completely alongside—paddlers need to take turns getting in and out by moving the canoe front and backwards. It is also very difficult to bring a canoe down the ramp due to the small width of the ramp and because the canoes tend to get lodged against the bridge (see picture).



Paddler launch is difficult to use (Photo: FMR)

This could be corrected by potentially shifting the ramp away from the bridge, which would require increasing the width of the pier at the bottom of the ramp. Increasing the width of the pier entirely (to the width of the base of the pier) might be desirable, in that it would also increase the length of the pier and allow

for easier entry into watercraft. In the future, increasing width of the ramp would be desirable, and handrails should also be placed around the top platform linking the ramp to the Riverwalk, as this poses a potential safety concern. Street parking is difficult at this location, but there is a garage across the water. There will also be a wine bar/business at this location in the future, which would provide restrooms to paddlers and the public in the future. Signage is also needed to identify this pier as public.

Performance Yacht Services (Brian Adams). Performance Yacht Services has boat slips for public rental, and also offers boats for rent. Paddlers are allowed to use open slips for public access to the rivers. The piers are high, floating finger piers that were created for motor boats, so they are difficult to use for paddlers. The piers are connected to the shoreline with wooden stairs. Performance Yacht Services would benefit by water trail signage, so that paddlers know that these piers are available for their transient use. Paddlers must pass through the Performance Yacht Services facility in the old Hansen Storage Building in order to gain access to the launch and/or street, thus the launch is only available during business hours. This has been denoted on the water trail map, but signage denoting business hours and access issues might be a good idea.



Paddlers can use available slips (Photo: PYS)

Skipper Buds (Skipper Buds). Skipper Buds is a full service marina with a series of piers/boat slips along the canal in front of their facility, as well as a fueling pier and places to moor alongside the marina on the mainstem of the Kinnickinnic.



Skipper Buds Piers along the Canal (Photo: FMR)

Skipper Buds also leases space to Barnacle Buds, which is a great local restaurant. Paddlers can use the available very high and narrow, floating piers along the canal for access; there is no designated launch for paddlers. The piers are connected to the shoreline by wide ramps that are easy to use. Another option is the floating fueling pier, which is a bit lower and easy to use, and connected to the seawall via a

fairly wide ramp. This would probably be the easiest pier to use and best pier to designate with signage, but would also require a fairly long portage around the building to the parking lot. Paddlers stopping at Barnacle Buds for food could use this pier most easily, but would need to pull their canoes out of the water and store them out of the way to make the pier available to boaters needing to fuel. Skipper Buds could also easily create a natural shoreline access or designate an access point for paddlers near the end of the canal (past the piers), and closer to the parking area. This would require installation of signage and fairly little work

in terms of adding some gravel, rock, sand, woodchips, or other natural material to harden the water access point close to the water and protect the bank. The end of the canal tends to fill up with floatable trash, so if this approach is taken, an access point should be chosen that tends to remain open from floatable trash, logs, and other debris if possible.

Pier Milwaukee (Chris Svoboda). Pier Milwaukee has several fixed, high docks for mooring of yachts and big boats. These piers are unusable by paddlers. However, a small pier exists adjacent to the Becher Street Bridge that is currently used to moor a small skiff for use in pier repairs, etc. Pier Milwaukee is currently upgrading this pier to provide public access for paddlers.



Pier along shoreline behind fixed pier (Photo: FMR)

Signage will be needed to clearly identify this pier as a water trail access site. This site is a good access point for Bayview residents, and a good access location for exploring the Kinnickinnic River.

5.4 Evaluation of Existing Boat Ramps

Four boat ramps currently exist as part of the Milwaukee Urban Water Trail at: Mequon Villa Grove Park, Thiensville Village Park, Apple Blossom Lane in Glendale, and the County Boat Launch/Bruce Street Boat Ramp across from the harbor entrance in Milwaukee. These facilities are designed first and foremost to be used by trailered motorboats; however, most of these ramps provide a nice, hard surface for paddle boat access and also have nearby areas that could be used for launching in case the ramp is being used by motor boats. Besides the obvious conflict with motorized boaters, negatives of using boat ramps to launch canoes and kayaks include slippery surfaces and shallow slopes that can make it difficult to put-in and take-out craft.

A short examination of existing conditions at each boat ramp within the Milwaukee Urban Water Trail follows below, as well as short recommendations for how each site can be improved. General recommendations for all boat ramps include installation of water trail signage at access sites to clearly designate that ramps are part of the water trail and available for public use. The ownership of each site is noted in parentheses. Appendix C includes a table of all water trail access sites listed by landowner, and the pages of the report in which they are covered. Appendix F includes potential funding opportunities for improving motorized boat ramps, which might also be used to incorporate separate amenities for non-motorized users.

Mequon Villa Grove Park (City of Mequon).

This ramp is very useable by paddlers, as are the adjacent banks, which are partially hardened with gravel to minimize resource damage.

Additional gravel could be placed closer to the



Paddlers can use ramp or adjacent shoreline (Photo: FMR)

banks to protect from erosion and more clearly designate a launch location. Water trail signage could be attached to existing signage at the launch site itself, and roadside signs should also be installed directing paddlers from Friestadt and Villa Grove Roads that lead into the launch site if possible. Parking and a Port-a-Pottys also exist at this site.

Thiensville Village Park (Village of Thiensville).

Paddlers can launch both from the boat ramp as well as from the riverbank at the adjacent concrete slab. Access site signage could be attached to existing signage. Thiensville has also recently finished a nice natural beach access site downstream of the dam, which could also benefit by a water trail sign. A large safety sign warning paddlers of the dam and need to portage right already exists upstream of the dam; however, the Village might consider including a portage sign downstream of the dam as well for paddlers coming upstream from the new Molyneaux Launch or other downstream launches.



Paddlers can use boat ramp or hardened shoreline at left (Photo: FMR)

Apple Blossom Lane (City of Glendale). The water trail sign could be easily attached to existing signage at Apple Blossom Lane, and Glendale might also consider placing a sign at the intersection of Apple Blossom Lane and Montclair Road to better direct paddlers to the site. The launch is fairly flat and easy to use, as is the existing bank. There is evidence of erosion affecting the bottom of the boat ramp (asphalt is breaking up) as well as some bank erosion and downcutting on the downstream bank. This bank could be better stabilized and protected by incorporation of some plantings and/or by addition of natural materials such as wood chips, gravel, etc. to protect the bank.



Apple Blossom boat ramp and adjacent shoreline (Photo: FMR)

Bruce Street Boat Ramp/County Boat Launch (Milwaukee County Parks).

This can be a very busy boat launch, and depending on wind direction, can be very difficult to use. The ramp itself can be very slippery, but there are two stationary, metal piers that were installed to help motor boaters launch their craft, and these are also useful to paddlers. There piers could use some repairs, as it appears that wear and frost heave have caused them to slant. If and when these piers are replaced, it would be advisable to make them lower if possible to be more user friendly for



Piers at County Boat Ramp are in bad condition (Photo: FMR)

paddlers. Given that there is some “dead” space on the outside of the piers, it may be possible in the future to add a floating pier or canoe or kayak platform adjacent to one of the sea walls that would cater to paddlers. See Appendix D. Water trail signage could be attached to existing signage at this location.

5.5 Evaluation of Shoreline Access Sites

Due to the urban or developed nature of most of the water trail, there is no shortage of boat piers and ramps. However, many paddlers do not necessarily need or want these types of facilities. In many conditions, natural or modified shorelines can make good (and cheap) access locations for canoes and kayaks. Most of the water trail sites that are either natural or modified shorelines exist in public parks. They can take the form of sandy shores or beaches, muddy shores, gravel or rocky shores, vegetated/natural shores or some combination of the above. Most of these sites are “unimproved” and thus depending on substrate, can be stable or show different levels of degradation including bank erosion and collapse, plant destruction, muddy shores, etc. Although many of these sites are useable in their current forms, signage is imperative to identify the sites. This is important not only so that paddlers know where to put-in and take-out, but also to minimize natural resource damage and/or confine it to a limited area. It is imperative that increased use of these sites by paddlers does not produce further degradation of the rivers and river corridors that paddlers have come to enjoy.

Many of these sites could be easily improved by more clearly defining the access sites with the use of grading, weeding, and placement of natural materials such as sand or gravel at the launch sites themselves. The latter is complicated by the fact that most of these shoreline access points lie within the river floodplains, and thus any materials added to a site have the potential to be washed away with the next flood. Thus, careful consideration must be given on whether and how to improve and harden many of these sites.

A short examination of existing conditions at each shoreline access site within the Milwaukee Urban Water Trail follows below, as well as short recommendations for how each site can be improved. General recommendations for all natural or unimproved sites include installation of water trail signage to clearly designate put-in and take-out points that are designated for the water trail and available for public use. In addition, each natural site *could* be improved by incorporating landscape improvements. Such improvements could include rocks, posts, and native plants and trees to more clearly define access sites, focus and restrict shoreline access (and thus minimize natural resource damage), and add visual interest. In some cases, sites that existed within a natural river corridor could also benefit by improvements in designated portage trails, and removal of non-native, invasive shrubbery that impair ecosystem health and make it difficult to traverse uplands with watercraft. The ownership of each site is noted in parentheses. Appendix C includes a table of all water trail access sites listed by landowner, and the pages of the report in which they are covered.



Molyneaux Launch (Photo: FMR)

Molyneaux Launch (Village of Thiensville). This is a brand new launch for non-motorized craft in the City of Thiensville, consisting of a ramp made up of pervious pavers leading from a small parking lot off of Mequon Road to the river. This site also contains a small park, and is well designed and a great access point for paddlers. There are no suggested improvements other than to potentially remove

some of the boulders that have settled at the toe of the ramp to make the site more user-friendly.

Schlitz Audubon (Schlitz Audubon Nature Center). Although paddlers could take out pretty much anywhere along the east bank of the river downstream of the Brown Deer Road Bridge, this site would benefit by more clear designation of an access site through signage and potential addition of shoreline stabilization materials and/or landscaping as described in the introduction to this section. The site might also benefit from a clearer delineation of parking to better protect the property from erosion and compaction, and from a roadside water trail sign to better direct paddlers to the site from Brown Deer Road. Schlitz Audubon might also consider delineating a short portage trail from the parking area to the launch in the future to minimize and confine resource damage to the property.



Access point is compacted area of bank (Photo: FMR)

Kletzsch Park Sluiceway (Milwaukee County Parks). This site is difficult to find and as such, needs signage both along the Milwaukee River Parkway leading into the picnic site area, as well as from the parking lot near picnic area #5 to the sluiceway site itself. Both of these signs could be attached to existing signage at the location, although a new post will probably be needed for the access site itself. This site could benefit from some site stabilization materials at the launch site, to protect the bank and better define the site. In the future, the trail from the



Access site is across lawn from parking area, follow area (Photo: John Mulhern)

parking lot could also be delineated more clearly with wood chips or other natural material if desired by the County. In addition, the site would be more useable with some limited removal of woody debris in the channel that is impairing navigation. There is a large oak tree that is down at the entrance of the sluiceway to the Milwaukee River; this tree provides great wildlife habitat, so it is

recommended that only a portion of the submerged portion be trimmed up or pruned to allow passage of watercraft.

Kletsch Park Falls (Milwaukee County Parks). This access site is probably the number one priority for improvement of all Milwaukee County Parks sites, due to potential safety hazards posed by the falls. The access site lies just upstream of the falls on the west bank of the river, and consists of a steep ascent up a natural, muddy, slippery streambank. The very short trail (approx. 15 feet) leading from the take-out to the top of the slope is often overgrown as well, making it difficult to find, although it is generally just before the outfall and start of the green fence at this location. At a minimum, this site needs some pruning of trees, removal of invasive shrubbery, and clearer demarcation and hardening of the take-out and portage trail with wood chips, gravel, or another natural materials, as well as a clearly visible sign from the water marking the access site. The take-out is dangerously close to the falls, but due to topographic constraints, it would be difficult to place it further upstream. Thus, this site should also have a portage sign easily visible from the water at the take-out, and at least one additional location 50 to 100 feet upstream of the site for safety reasons. The City of Glendale has installed floating safety buoys in the past indicating the falls, but these have not been noted in recent years. The Milwaukee County Parks and/or the City should insure that either safety buoys and/or signage exist. Since these falls are human-made, the DNR could also require that the landowner post safety signage or buoys at this location as soon as possible. A better long-term solution for the take-



Kletsch Falls take-out up steep bank (Photo: FMR)



Take-out very close to Falls (Photo: FMR)

out would be to potentially construct a floating, cantilevered, or stationary pier with handholds parallel to the shore that would clearly define the site and be easier to use and grasp, especially during high and fast water. The take-out trail could also be improved potentially by creation of stairs or vegetated terraces—with timber, logs, or coir logs. In addition, the portage trail leading from the take-out to the put-in downstream of the falls could be better delineated with wood chips if possible, and a path should be cleared through the woodland adjacent to the put-in by selected removal of invasive shrubs and



Put-in is downstream of falls on the west bank, adjacent to old retaining wall (Photo: FMR)

pruning. The put-in access site should also be better delineated with signage and gravel if possible, and ideally, the site would be much more easy to use if some of the boulders close to the access site were removed to allow easier launching.

River Forest Drive (City of Glendale). This is a new water access site that is located on a vacant city lot owned by the City of Glendale on River Forest Drive. It needs a water trail access sign visible from the road as well as visible from the river. The existing portage trail is sufficient, but could be enhanced with natural materials such as wood chips, gravel, etc. This parcel also could be landscaped as a nice park and asset to the local community. It is very flat and open, and easy to use. The existing natural, sandy bank access site is easy to use, but somewhat eroded and could benefit by some bank stabilization in the future.



Access site is natural sandy bank across lawn (Photo: FMR)

Estabrook Dam (Milwaukee County Parks). Milwaukee County Parks recently installed safety signage upstream of the dam, including signage on the Port



Paddlers taking out past "sharks teeth" when the dam is closed (Photo: FMR)

Washington Road Bridge (indicating dam 200 yards ahead), a sign indicating portage 100 yards ahead, a canoe take-out sign, and a sign on the island indicating the dam structure itself. This is a great improvement, and the County and DNR should be commended for making this happen. The current take-out sign is upstream of the dam "sharks teeth" or debris catchers approx. 50 feet. Many paddlers have expressed that this take-out

would require a longer than necessary portage. This sign should be moved closer to the sharks teeth, although it is still reasonable to keep this sign upstream of the sharks teeth (placed on a tree or post) to ensure that paddlers have plenty of time to get off the river, especially in high water when the gates are open. Currently most paddlers take out just downstream of the sharks teeth (see photo). This site could benefit by some grading, but is in pretty good condition. However, it might be desirable to eventually construct a take-out upstream of the Sharks teeth for safety. This would require grading of the bank, some toe stabilization, and potential removal of vegetation. The bank adjacent to the sharks teeth has some severe erosion issues, because when the sharks teeth are clogged with debris, water tends to go around them, scouring the bank. Repair of this bank could be combined with construction of a new, safer access point. During most of the summer when the dam is closed, some paddlers take-out even closer to the dam, or directly in front of the dam. There is significant resource degradation along the entire stream bank from the sharks teeth to the dam, and it may be desirable to designate one access site and rehabilitate the other. The designated site should

receive signage. The portage from the take-out to the put-in downstream of the dam is quite long, so at least several portage signs should be installed at the take-out, at the north side of the parking lot, and at the entrance to the portage trail on the south side of the parking lot. The portage trail could also be improved through pruning of the vegetation, especially in the portion of the trail south of the parking lot, and clearer delineation of the trail. The put-in downstream of the dam is a natural beach, which is quite hard to use due to the large amount of boulders at this location. The put-in could be improved by targeted removal of rocks and boulders to enhance usability.



Paddlers at put-in below Estabrook Dam (Photo: FMR)

Another potential option that the County might consider in the future is to re-open and improve a portage trail on the island between the dam and the spill-over. In the past, this portage trail was highly used by paddlers, but has been difficult to use in recent times due to the amount of garbage accumulating in this area as well as the proliferation of exotic, invasive shrubs. Clearing this trail would result in a much shorter portage trail, and potentially, a better and easier put-in (although this whole part of the river downstream of the dam is very “rocky” and shallow during most of the summer).

Estabrook Falls (City of Glendale). Estabrook Falls are natural, and as such, the landowner is not required to install safety signage. Although many kayakers prefer to just paddle over these falls, it is not recommended for unskilled kayakers or canoeists. The portage on the west bank of the river around these falls is unmarked and may be difficult to spot by paddlers unfamiliar with this stretch of the river. The take-out is also very degraded, with downcutting and erosion present. This site could be stabilized



Take-out above Estabrook Falls (Falls start adjacent to large tree (Photo: FMR)

and graded to make it more user-friendly. This portage should be clearly marked upstream of the falls with water trail signage as well as portage signage. The put-in can be difficult due to the rocky substrate, but is stable

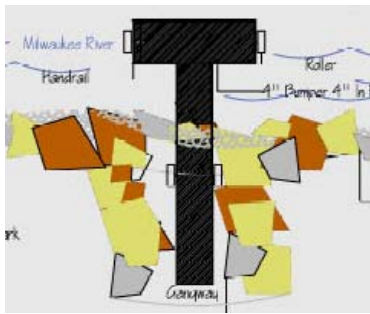
Hubbard Park (City of Shorewood). This site is difficult to find from the land, and roadside signage should be installed at several locations including the end of Menlo Avenue, the entrance to the Park, and the access site itself, as well as potentially the entrance to the pedestrian tunnel, and entrance to the “circle drive”, which could be used to drop off watercraft. The current sign at the circle drive stating that paddlers must get permission of the police department to launch watercraft needs to be removed as soon as possible. There is a small path leading down to the water at this location that could be more clearly delineated and made

wider through removal of weedy vegetation. This bank tends to get very muddy as well, so could be improved potentially by incorporation of gravel or other material.



Natural bank access at Hubbard Park (Photo: FMR)

Riverside Park/Urban Ecology Center (Milwaukee County Parks/UEC). At the present time, this site is a



Proposed pier design (Photo: UEC)

water access site only, as it is a good hike down from the Urban Ecology Center (UEC) to the Milwaukee River. UEC often brings canoes down fairly close to the river using motorized equipment, but it is very difficult for the general public to access this site from the land. The bank at the access point can be very muddy and eroded during a good part of the year, and the site is difficult to identify from the water (just downstream of the Locust Avenue Bridge, on the east bank). UEC has been working on a plan for improving this access point for the last year, and

has come up with a design to construct an ADA accessible pier at this location, which will connect to the Center with an ADA accessible path. The bank will be stabilized with a combination of riprap and tumbled or weathered outcropping stone, which will protect the gangway or ramp out to a floating, accessible pier that is parallel to the shore. The pier will be equipped with handrails and bumpers, and will also contain rollers so that the pier can be moved easily or taken out during the winter. This pier will be used for launching watercraft, for fishing, and other educational purposes. UEC should be commended for creating an ADA accessible launch at this location. Sadly, there are few “destination points” that are ADA accessible; this highlights the need to retrofit existing water access sites or create new sites to make them ADA accessible.

North Avenue Dam (City of Milwaukee/Milwaukee County). The removal of the former North Avenue Dam in 1997

opened up over 30 river miles for fish and paddlers alike, and allowed for more flushing of pollutants, which has improved water quality. When the dam was removed, artificial riffles were installed to improve wildlife habitat. During low water, these riffles can be nearly imperceptible, but during high water, the area from North Avenue Bridge to the former foot of the North Avenue Dam



Portage trails on both banks downstream of North Ave. Bridge (Photo: FMR)

(now a pedestrian bridge) can approximate a Class I or Class II rapids. In addition, it is not uncommon for woody debris or rocks to be come lodged within this section, making it difficult to maneuver. For this reason, inexperienced

paddlers and even experienced paddlers may opt to portage around this area during certain conditions. The City of Milwaukee has public access easements on either side of the river at this location, thus it is legal for paddlers to take-out upstream of the bridge (using the natural banks) and then put-in again just past the rapids area either upstream or downstream of the pedestrian bridge. There are “desire-line” trails on both sides of the river at this location, which are usable; however, significant improvements could be made at this location by more clearly delineating the trails with removal of weeds and potential addition of natural materials, and by installing portage signage at this location and stabilizing the take-out banks. Much of this work could be done by volunteers at low cost. The put-in banks are lined with rip rap and articulated concrete mats at most locations. This makes putting-in very awkward. A better long-term solution would be to construct a floating pier downstream of the pedestrian bridge in Cesar’s Park on the east bank, which could be connected to the shore or old bridge footing via a ramp. If this could be created, then the portage trail on the west side of the river could be closed to access. The west side of the river is owned by a private landowner who is unwilling to grant access at the current time, as the property is for sale.



A put-in is recommended for the corner downstream of the pedestrian bridge in Cesar’s Park (Photo: FMR)

6.0 Filling in the Gaps in Access

This section identifies the gaps remaining in river access sites in the project area of the Milwaukee Urban Water Trail, and identifies needed additions and improvements of facilities and strategies for addressing existing obstacles where appropriate. These sites were identified partially using recommendations from boaters and completed access site evaluations. Unlike other more remote or “wilderness” water trails, additional access points are not really *needed* for the Milwaukee Urban Water Trail in terms of providing adequate rest facilities (recommended for every 4-6 miles), camping facilities (recommended every 10 miles), water sources, etc. However, FMR feels that it is important to provide paddlers as many opportunities as possible to access our rivers and to cater to the growing demand for recreational activities in urban and suburban areas.

It is important to note in reviewing the remaining gaps, that the majority of highly aesthetic, available, and easily accessible segments have either already been constructed or are currently in use and described in the sections above. The sites that remain are often less accessible and attractive, located in heavily industrial or urban areas, or located in areas dominated by private land ownership. As such, major constraints exist for many of these sites. Some of the sites identified below as potential river access sites are already being planned, others are currently being constructed, and others are entirely conceptual. Similarly, some sites only need simple improvements to accommodate paddlers, while others may need more costly improvements such as constructed piers/ramps, new facilities, or property/easement acquisition, etc. In addition, some of

these sites may not be a priority for development until certain issues are worked out including land ownership, limited access due to construction or other activity, user-conflicts, physical obstacles, etc. Despite these obstacles, FMR felt that it was important to list all potential sites as changes in conditions, availability of resources, and community interest could alter the feasibility and priority of adding some of these access sites in the future.

6.1 Filling in Gaps on the Milwaukee River

Of the three local rivers, the Milwaukee River is the most easily accessible within the project area of the Milwaukee Urban Water Trail. Most of the gaps in access occur in residential suburban and urban areas.

Existing Gaps and Opportunities

The largest gaps in access along the Milwaukee River occur between the Molyneaux Launch in Thiensville and the Schlitz Audubon Launch south of Brown Deer Road in River Hills (4.2 miles) and between Schlitz Audubon and the Kletzsch Park Sluiceway in Glendale (4.4 miles). These gaps occur largely due to primarily private land ownership in the cities of Mequon and River Hills. Although these gaps are not that significant from a “necessity” stand-point, it may be desirable to look for additional access points in these reaches or “seize” opportunities as they come up.

The easiest places to pursue future access would be at the publicly owned or publicly accessible properties along these stretches, which include: the Ozaukee Country Club (fairly close to Molyneaux Launch, so not a priority); River Barn Park, and Milwaukee Country Club (potentially downstream of bridge crossings and off the golf cart trail or behind the main club house building). There are obvious user-conflict and safety issues with encouraging launches in golf courses, although most golf courses own significant waterfront property that lies apart from the actively used holes/tees. These golf courses would also presumably have issues with controlling and managing access, as well as minimizing potential natural resource damage from creating new launch sites.

Public access could also be pursued adjacent to State owned highway bridges, which often contain public access easements on either side. However, these properties often have physical constraints such as steep terrain, and might also have environmental and safety obstacles that would have to be analyzed before encouraging use. In addition, the only State owned highways within the “gap” area are Mequon Road (STH 57), which is near to the Molyneaux Launch, and Brown Deer Road (STH 100), which is near the Schlitz Audubon Launch. Thus, these sites would not be a priority.

There are also several sites along the Milwaukee River, which were considered for the water trail map, but not included due largely to timing or management issues, but could be reconsidered in the future for access. These sites include:

The Hilton Milwaukee River (Hilton). The Hilton Milwaukee River on Port Washington Road is a nice launch, which has been used by paddlers in the past due to its close proximity of parking to the natural streambank. Past managers of the Hilton have given verbal permission to paddlers to use the property, but the present hotel management did not give permission for inclusion in the map due to liability concerns. Due to the close proximity of this site to other access sites in Lincoln Park and Estabrook Park, this site was not pursued; however, it could be considered in the future as a good site for both ADA access as well as for paddlers unable to use the Estabrook Dam site due to difficulty.



Hilton access with open dam (Photo: FMR)

The Post Office Site (Manpower). This site is on the east bank of the Milwaukee River, off of Edgewater Drive, which is accessible via Lexington



Post office bank from Milwaukee River (Photo: FMR)

Avenue, west of Port Washington Road. There were several homes at this location, which were demolished to accommodate a post office staging facility. As part of the deal of developing this location, the Milwaukee County Parks, which would have lost some of their upland property to accommodate the building, would have gained more riverfront property (owned by Manpower) and a canoe launch and small

parking area, as well as several other sites owned by the City of Glendale. This deal fell through at the last minute; however, several houses were already demolished. The parking area was meant to be located on the existing footprint of one house, with a natural shoreline launch and short portage trail developed. The future of this property is unclear, and apparently, is now still owned by Manpower.

Hometown Gas/WI Paperboard (Hometown Gas). This site is on the east bank of the river immediately upstream of the North Avenue Bridge. There is a dirt road that leads from North Avenue down to the river, which the City of Milwaukee has a public access easement on, and has been used by several paddlers for launching. Although Hometown Gas has several parking spaces adjacent to the road, there is also a very large gravel parking lot currently being used/leased by Wisconsin Paperboard that has been used in the past by paddlers. This property was originally going to be included in the water



Path leading from Hometown to river (Photo: FMR)

trail, but was removed due to the property being currently up for sale. The current owner felt the timing was inappropriate, but this site could be considered again in the future when the land is under new ownership or if conditions change.

Melanec's Wheelhouse (John Chowanec)/Riverboat Road (City of Milwaukee). This property was also considered as a potential access point. This area is especially popular with kayakers, who like to use it access the North Avenue rapids area for "playboating". This property is also changing ownership, and likely to become condos. It is unclear whether or not the new owners would consider public access to this site. However, as an alternative, another site closer to the former North Avenue Dam could be improved as a launch site. This site could be accessed from Riverboat Road and could tie into the "optional" portage at the North Avenue Dam on the west bank of the Milwaukee River. Alternatively, access could be improved on the east bank at Cesar's Park.

The former US Bank/Chase Pier (Chase Manhattan). When the water trail map was being published, this pier was unavailable due to construction of the RiverWalk extension from Clybourne Street to the Third Ward. It was also not "necessary", as a nearby launch for paddlers exists at the new RiverWalk Park at the intersection of Water Street and St. Paul Avenue. This pier will be available to the public in 2006, and should be included in future revisions of the water trail map and promoted as public. However, this pier is difficult to access from the land. It can be accessed from the RiverWalk via Clybourne Street or through the parking garage on Water Street and Clybourne.

Under Construction

There are also several sites that are now under construction, and could potentially be available for use in 2006 and 2007, respectively. They include:

The Harborfront Condominiums (Peter Renner). Between the Harborfront Condominiums and Hansen's Landing Condominiums close to Summerfest's Marcus Amphitheater, will be a public water taxi landing at the end of Jackson Street extended. There will be public access at this location, but it will presumably be a high floating pier. There is also expected to be transient piers that will cater to customers of new businesses along Erie Street as well as the Riptide Restaurant within the Harborfront, starting in 2006.

Marine Terminal Lofts (Mandel Group). A public water taxi pier is also expected as part of this condominium project on Erie Street, which would be accessible to paddlers in 2006 or 2007.

Lakeshore State Park (WDNR). Lakeshore State Park is currently under construction. The renovated park will include a natural, sheltered beach at the tip of the current park lagoon and opposite of Pier Wisconsin. This beach will be accessible to kayakers and canoeists hopefully sometime in 2007.

6.2 Filling in Gaps on the Kinnickinnic River

Although there are relatively few river access points on the Kinnickinnic River, there are only approximately 2.6 miles of the river that are available to paddlers, excluding the turning basins and inner harbor area, which pose safety concerns. Thus, additional access points are not necessary, but may be desirable for incorporation into future projects. For example, Southwind Marine recently received a permit to place 3 piers perpendicular to the shore (6 slips) west of their existing boat ramp and a small wharf parallel to the shore to the east of their existing boat ramps. These slips are transient and will be available to the general public. FMR testified at a hearing in November 2005 that space should be made available, and hopefully designed, for non-motorized craft if possible. Public parking will also be made available at this site as a condition of their permit. Thus, this site should be included in future versions of the water trail map and publicized as a public access point. This landowner was originally contacted for inclusion on the water trail map, but declined due to timing issues.

In addition to Southwind Marine, efforts should be made to advocate for public access as part of any future private developments along the Kinnickinnic River and Inner Harbor. There are several rumored condominium complexes on areas that are currently old boat yards and industrial areas, and as properties become redeveloped, every effort should be made to ensure that paddlers, fishermen, and the general public retain some public access to their rivers. Other areas to consider for future public water access if the opportunities arise would be perhaps the Great Lakes Water Institute and ends of other sheltered and underutilized canals, such as the canal adjacent to the Nidera building.

Special considerations in developing future access points along the Kinnickinnic River include: the potential future dredging of PCB contaminated sediments from Becher Street to the confluence with the Milwaukee River Estuary (thus permanent piers would be discouraged); and the presence of extensive contamination adjacent to the Solvay Coke site near the Kinnickinnic River/Milwaukee River Estuary (paddlers should not come into contact with contaminated sediments). The Kinnickinnic River can also be very congested with motorized boat traffic during certain times in the summer, which could pose a potential safety hazard to paddlers, especially if traffic increases.

6.3 Filling in Gaps on the Menomonee River

There are no formal water access points on the Menomonee River for the Milwaukee Urban Water Trail; however, one-way excursion distances from the Chicago Street Access in the Third Ward were provided on the water trail map as the 2.3 miles of the Menomonee River out to approximately 28th street (the end of the project area) offer an interesting “urban” paddling experience. Although several “existing” access points were considered for inclusion to the water trail map, these were all ultimately excluded due to different considerations. Some of these access points, such as Pettit Point, are still worth future consideration for access but are temporarily unavailable due to construction or other reasons (see below).

Other access points that were considered and eliminated from future consideration include Lower Lakes Marine and Cramer Marine, which are not set up currently for paddler access, and are difficult to access in the summer when motor boats and yachts are heavily moored at the sites. In addition, electrical lines and other safety concerns exist at Cramer Marine, which is adjacent to the We Energies Valley Power Plant, which make this site less than optimal for future access. Menomonee Valley Partners also owns some property at the end of the South Menomonee Canal, which will be another City of Milwaukee stormwater bioretention area that was considered for a public river access. While this property will hopefully be made available to the public and future employees of the Valley for fishing and relaxation, it is not recommended for a canoe access site based on safety concerns of paddling in this canal with heavy coal barge traffic.

Most of this section of the Menomonee River contains cement retaining walls or steel sea walls, which severely limit the opportunity for any “cheap” additions of river access points. However, there are many upcoming projects along the Menomonee River, particularly in the Menomonee Valley that will provide good opportunities for incorporation of river access in the future. Below is a list of potential access points that could be considered in the future:

MMSD Seeboth Facility (MMSD). MMSD has piers on both sides of their facility, both along the main channel of the Menomonee River as well as the Burnham Canal. The piers on the Burnham Canal side are used for mooring large motor boats, but there is a small floating pier on the main channel that could potentially be used. This pier was not pursued largely because it is very close to the Third Ward Chicago Street access, and is a bit difficult to find and access. If condo development and demand for river access increases in this area, it might be worth pursuing again in the future if MMSD is interested in granting access.

Pettit Point (City of Milwaukee) Pettit Point is a popular fishing location on the *natural* northbank of the Menomonee River under the Marquette Interchange. There is street parking nearby and potentially under I-794. This access point is temporarily unavailable due to construction activities associated with the Marquette Interchange Project. However, it would be very easy to convert part of the natural riverbank at this location to a good launch/access for non-motorized craft and fishermen in the future, and it might also be possible to create a small parking area and nice mini-park/landscaping adjacent to this launch as this area is restored after the highway construction is completed. Due to the fairly long time table for this road construction project, it might be still possible to influence the design of this site in the future.



Natural bank access at Pettit Point (Photo: FMR)

Harley Davidson Museum/Traser Yards (Harley Davidson). Harley Davidson is purchasing the old Milwaukee Public Works Yard known as Traser Yards in order to create the Harley Davidson Museum. Part of this project will include a Riverwalk along this unique property, which is surrounded on three sides by the waters of the Menomonee River and the Burnham Canal. This site will also be nicely landscaped and available to the public, and would potentially be a good spot for a future access point. However, access should probably be placed on the Menomonee River main channel as opposed to the Canal due to potential damage that could occur from the coal barge that passes through this section on its way to the South Menomonee Canal. This pier should be floating, parallel to the shore (to minimize navigability issues) and connected to the shore with an ADA accessible ramp if possible. In addition, ideally a pier would be close to parking or at least to a drop-off location.

Emmber Lane/13th Street (City of Milwaukee). The northwest corner of the Emmber Lane Bridge has been a problem area for years. Originally built to accommodate larger barges and tugs that might need some additional space to turn, this corner of the river currently accumulates very large quantities of floatable trash. Past efforts to keep it clean have been unsuccessful, and it is too shallow to reach with the Skimmer, which is used to skim floatable trash off of most of the rivers in downtown Milwaukee. There is currently a small team of people who are working on a long-term solution to this corner,



Garbage at Emmber Lane (Photo:FMR)

including representatives from FMR, DNR, Menomonee Valley Partners, Cargill/Emmpak Foods, the Milwaukee Harbor Commission, the City of Milwaukee, and Sigma. The solution currently being studied would incorporate a non-motorized access (floatable pier or stationary pier on a submerged “garbage” barrier), as well as improve habitat and aesthetics and minimize accumulation of garbage.

Marquette Playing Fields (Marquette University). Marquette University owns a large complex of playing fields on the south shore of the Menomonee River near Potowatomi Bingo Casino. Adjacent to the playing fields is a small, floatable pier, which is currently used to rescue soccer balls and other equipment. Several inquiries were made to Marquette staff about this pier, but contacts seemed unwilling to open up this pier for public access, as this would probably necessitate moving the pier to a more accessible location, adding a ramp (a ladder is currently being used), and improving the pier itself. Despite these hesitations, it is still worth pursuing an access at this location, as an access for paddlers would seemingly benefit the community as well as Marquette students. The Potowatomi might also be interested in helping to facilitate access to the river at this or

another nearby location, as they are strong environmental advocates with a historic tie to the Menomonee River and Menomonee Valley.



River access could be added (Photo: MVP)

Canal Street/25th Street (City of Milwaukee). The City of Milwaukee, in cooperation with MMSD, is currently creating a stormwater bioretention facility at the intersection of Canal and 25th Streets. The original designs for this project included parking, and terraces leading down to the Menomonee River at the southwest corner of the site. These terraces would provide a good opportunity for incorporation of river access for paddlers. This would also be a good take-out or put-in site for paddlers that are not able to paddle the fairly long 4.6 mile roundtrip from the Chicago Street access site in the Third Ward.

28th Street (City of Milwaukee). Currently, river access is also being considered for the south bank of the Menomonee River at 28th Street. Like the possible 25th Street access, this site could also be a good take-out or put-in for paddlers to explore the Menomonee. This site is primarily being considered for a fishing pier, as it will be difficult to access by car from the land, being confined by the river on one side and the rail road tracks on the other. However, this site could make a nice resting area/picnic area, especially if public access is not allowed at 25th Street, and could also be a good spot for exploring the old airline yards and Menomonee Valley.

Under Construction-Menomonee Valley Access at 36th Street

The Milwaukee Urban Water Trail map was cut-off at 28th street, largely due to map formatting reasons and also because the water levels at this location generally get very low during certain periods of the summer and early fall, making it difficult to get further upstream. However, there is currently river access being constructed in the west end of the Menomonee Valley at approximately 36th Street as part of the west end redevelopment of the valley, which will house new industry and businesses, and incorporate parkland, innovative stormwater treatment, and the Hank Aaron State Trail. This access will be a great addition to the water trail in the future, and will be a nice take-out for paddlers traveling from further upstream and from downstream during higher flows. The access point will be a sloped ramp/graded surface on the north bank of the river, made up of pavers. The access will be accessible in spring 2006 via the Hank Aaron State Trail, with the closest parking at Miller Park. The access point will also be accessible via Canal Street after construction is completed on the Canal Street extension.



Access open in 2006 (Photo: MVP)

7.0 General Recommendations and Strategies

Local public agencies are encouraged to conduct more detailed feasibility studies to determine the costs and benefits of constructing the access points recommended in this report. In addition, public agencies are encouraged to incorporate river access into their planning efforts, and to pass resolutions and ordinances in support of the water trail and river access in general. In this way, local governments in particular could require easements for river access and/or construction of access sites when new developments occur, and thus help “fill the gaps” remaining in the Milwaukee Urban Water Trail. New developments should also install signage at new access sites created as part of their development projects. Public agencies and partners could also pursue funding of new access sites and improvements of existing access sites through their own budget processes as well as other funding sources. Agencies, organizations, or individuals creating new access points (or improving existing ones) are encouraged to coordinate with managers of other water trail sites, and to provide a public forum for feedback and discussion among all interested parties. FMR would be happy to serve as a “clearinghouse” for information, ideas, and actions associated with improving the Milwaukee Urban Water Trail as well as general river access on our three rivers.

In addition to installation of water trail signage at all access sites, which was previously discussed, access site owners and managers are encouraged to provide ancillary services where possible. This could range from allowing paddlers to use existing public restrooms and parking to providing trash receptacles and other services. In addition, in light of the fact that enjoyment of the water trail can be closely tied to water quality, aesthetics, and associated events/activities, water trail advocates are encouraged to support the following:

- River clean-ups, especially at access sites;
- Recreational, cultural, and educational activities or festivals along our rivers;
- Opportunities to celebrate the rivers on the rivers (e.g. paddle events, races, etc.);
- Good riparian corridor policy, ordinances, etc. that protect our shorelines and make the water trail more aesthetically pleasing;
- Incorporation of “from the water” aesthetic considerations into public works projects such as bridges, shoreline stabilization, and flood management projects; and
- Incorporation of non-motorized boat access under roadways/bridges as opportunities arise, as well as replacement of culverts to bridges where possible to allow for paddler access to rivers (as well as benefit fish and wildlife populations).

Funding Considerations and Sources

Admittedly, the implementation of improvements to existing access points and construction of new access points will depend on access to funding for both public and private landowners. Although FMR can not commit to funding future access projects, we can help identify potential funding opportunities, serve as a partner on these projects, and potentially, as a non-profit fiscal agent. FMR can also help facilitate communication

among parties working on river access issues, and provide some information regarding others in the region that might have expertise solving problems, serve as good case studies, or provide good examples and “best practices” for improving river access. In addition, non-profit public service groups and university service groups are good partners in implementing improvements to the Milwaukee Urban Water Trail. Potential funding sources to implement recommendations from this gap analysis are included in Appendix F.

8.0 Summary

The Milwaukee Urban Water Trail fills a need to educate the public about safe and legal access points along 25 miles of the Milwaukee, Menomonee, and Kinnickinnic Rivers. This is especially important given increasing private development along our rivers and increasing interest in aquatic recreation. The water trail benefits the local community by promoting: recreational opportunities and access to rivers and adjoining riparian corridors, parks, and open space; stewardship and protection of our natural resources; community health and safety, including alternative opportunities for exercise; and economic vitality and transportation alternatives in our region.

The water trail was developed via a collaborative process, which involved representatives of Federal, State, County, and local governments as well as local non-profit organizations, businesses, and paddlers. Approximately 33 access or portage sites were identified and designated as official water trail sites; sites were selected based on community feedback, site suitability and evaluations, and receiving the required permissions or approvals for public access. Water trail access sites and associated amenities are listed on the Milwaukee Urban Water Trail map that was finished in September 2005, and all sites will receive signs clearly identifying them to the public in spring 2006. There is also an ongoing effort to publicize the water trail via earned media such as newspapers and radio, as well as through our partners at local nature centers, businesses, etc.

This gap analysis details the existing access sites that are part of the Milwaukee Urban Water Trail as well as recommendations for how these sites can be improved. For simplicity, these sites were organized into the following categories: piers, boat ramps, and natural shorelines. Most of the shoreline sites are useable in their current conditions but could be improved by: more clear delineation of the sites; planting native trees, shrubs, and plant species to stabilize and beautify the sites; adding natural materials such as gravel to stabilize the access sites and minimize resource damage; and by removing rocks in some locations that make sites difficult to use and improving the grading. These improvements would be fairly inexpensive, and could be largely implemented by volunteers and/or municipal staff. Likewise, most boat ramps in the area are already useable by paddlers; however, conflicts with motorized boats could occur and it is advisable to have other nearby shoreline/bank alternatives for paddlers where possible. In addition, several local boat ramps could use some minor repair work that could be more costly than improving natural sites. The good news is that State funding exists for

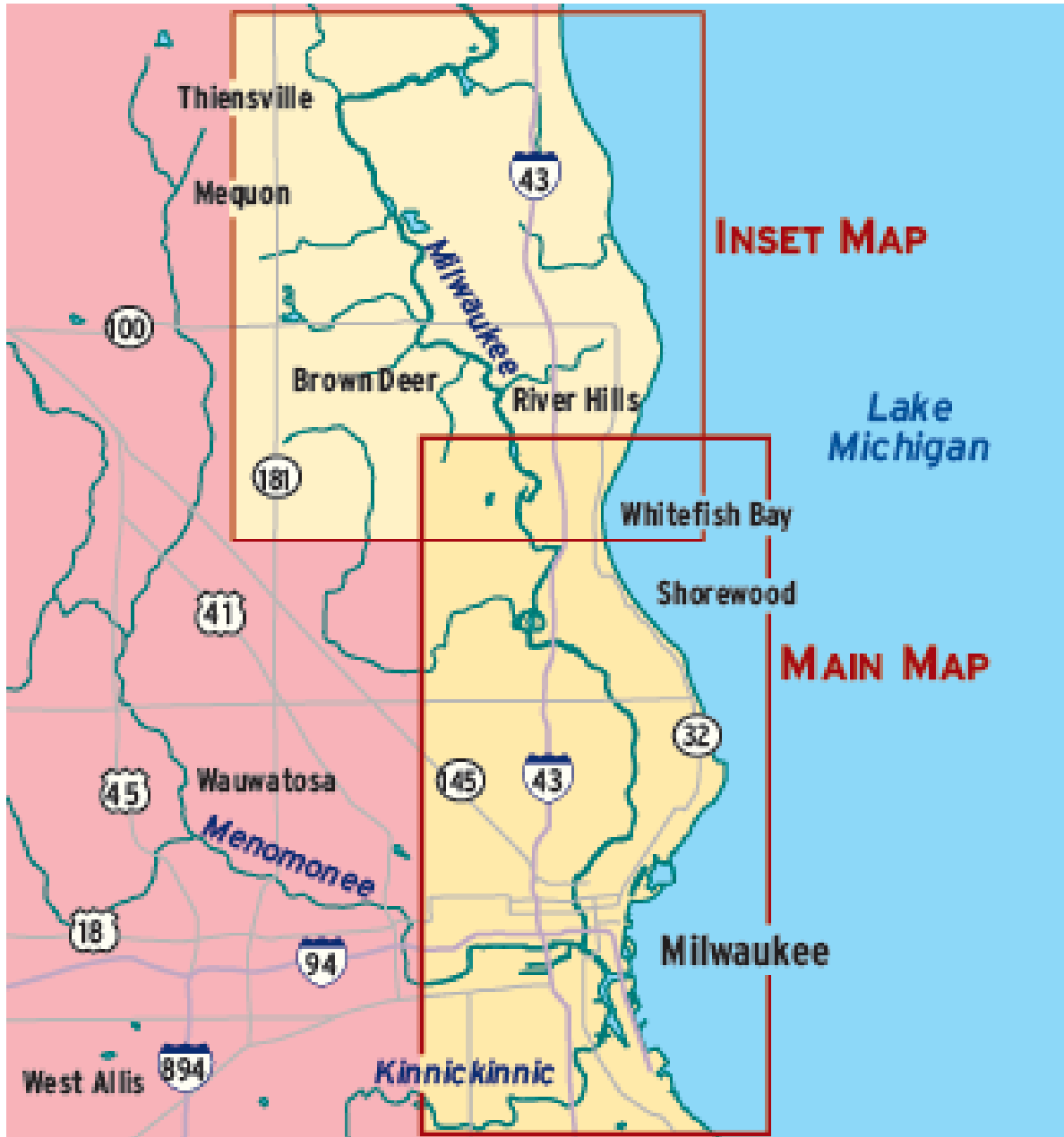
improving access points that cater largely to motorized users through State grant programs subsidized by motorboat gas taxes (see Appendix F).

Pier access sites are mostly located in the City of Milwaukee, except for the Lincoln Park Fishing Pier, which is managed by Milwaukee County Parks and very useable by paddlers in its current form when the dam is open. The piers in Milwaukee, both public and private, largely cater to motorized boats and are generally high, floating piers, which are difficult to use by paddlers (other than the Milwaukee Rowing Club and RiverWalk Park piers). It would be difficult and costly to retrofit many of these piers, and in many cases, lowering piers would make them difficult to use for motorized boats. Thus, it is recommended that only certain piers be actively looked at for retrofits (e.g. Pere Marquette Park) where there is space to either add step-downed piers for paddlers or new piers exclusive for paddlers. In addition, when both public and private piers need to be replaced, it would be advantageous to determine whether a section of the pier could be made lower for paddlers and/or whether a floating platform could be added onto the end of a high floating or fixed pier (see Appendix D for a list of commercial suppliers). These improvements could be relatively costly, and thus would depend on finding funding opportunities or costs could be born by on-going transportation and development projects.

This gap analysis also details other access sites on the Milwaukee, Menomonee, and Kinnickinnic Rivers, which could be considered as water trail sites in the future depending on opportunity and funding. Some of these sites were not completed when the water trail map was printed; others were temporarily unavailable due to construction (e.g. Pettit Point under the Marquette Interchange); and others are located in more challenging places in the watershed with high sea walls and awkward land access, and thus would be more difficult and costly to improve. These sites are listed in the report to stimulate discussion and ideas.

Lastly, the gap analysis also provides some general information on potential sources of funding, and provides some examples of potential designs for retrofitting existing access sites and creating new ones. This gap analysis is an important tool for public officials, landowners, land managers, and water trail advocates to focus future efforts to improve river access and fill in the remaining gaps along the Milwaukee Urban Water Trail.

Appendix A: Project Area of the Milwaukee Urban Water Trail



Appendix B: Milwaukee Urban Water Trail Access Site Evaluation



Milwaukee Urban Water Trail Access Site Evaluation



Inventory person, contact information (phone, email):

Location:

(Site name, address, GPS coordinates if known, etc.)

Ownership:

(Name of government agency, organization, private business, etc. Indicate if unknown.)

Type:

(Choose from terms on back or describe if other.)

Conditions:

(Choose from terms on back, or describe if other.)

Parking:

(Choose from terms on back, and describe number of spaces, distance to access, parking restrictions, etc.)

Restrooms:

(Choose from terms on back, or describe if other.)

Other on-site or nearby facilities:

(Restaurants, potable water, paddling supplies, public phones, picnic areas, etc. Include distances.)

Paddling points of interest:

(Fun paddling excursions, hiking trails, places to visit, etc. Include paddle times if appropriate)

Ecological, cultural, or historical sites:

(Unique natural features/parks/trails, museums, performing art centers, historic sites/attractions with signage, etc.)

Hazards to river access:

(Current, logs, variable water levels, dams, drop structures, natural falls, etc.)

Existing signage:

(Is there adequate signage to site from road? Is take-out/put-in obvious from river?)

ADA accessibility:

(Is put-in and take-out accessible for the handicapped? Is parking, restrooms, riverwalk, etc. accessible for handicapped?)

Recommended improvements to access site, portage, parking, signage, etc.:

Terms

Types:

Hand carried, non-motorized: Paddlers can put in or take out at these sites with any non-motorized watercraft within a reasonable walking distance to their vehicle.

Water access only: These sites may be used for stopping or resting, but there is no access from the shore for launching watercraft. There is also no or little parking available at these sites.

Motorized boat launch: These sites are primarily intended for use by motorized watercraft; however, non-motorized boaters are also able to use them. These sites have varying levels of accommodations for non-motorized watercraft users and have inherent safety considerations.

Conditions:

H = High dock/pier or seawall
F = Floating dock or pier
S = Sandy shore
G = Gravel or rocky shore
V = Vegetated/natural shore

L = Low dock/pier or seawall
R = Motorized boat ramp or launch
M = Muddy shore
W = Water levels fluctuate widely
C = Concrete steps/concrete retaining wall

Parking:

Y = Yes, more than 10 spaces
L = Less than 10 spaces
S = Street parking (specify restrictions)

N = No
W = Water access only
G = Parking garage nearby

Restrooms:

Y = Public flush toilets available
P = Port-A-Potty type of device

N = No sanitary facilities available
W = Public restrooms available in walking distance

Appendix C: Index of Existing Water Trail Access Sites by Landowner

Access Sites	Owner/Managing Entity	Page of Gap Analysis
Mequon Villa Grove Park	Mequon	26
Thiensville Village Park	Thiensville	27
Molyneaux Launch	Thiensville	29
Schlitz Audubon Nature Center	Schlitz Audubon	29
Kletzsch Park Sluiceway	Milwaukee County Parks	29
Kletzsch Park Falls	Milwaukee County Parks	30
Apple Blossom Lane	Glendale	27
River Forest Drive	Glendale	31
Lincoln Park Fishing Pier	Milwaukee County Parks	17
Estabrook Dam	Milwaukee County Parks	31
Estabrook Falls	Milwaukee County Parks	32
Hubbard Park	Shorewood	32
Riverside Park/Urban Ecology Center (UEC)	Milwaukee County Parks/UEC	33
North Avenue Dam	Milwaukee DCD	33
Milwaukee Rowing Club	Rowing Club and DCD	17
Lakefront Brewery	Lakefront Brewery	18
Trostel Square Condos	Trostel Square Condos/Mandel	18
Ogden Realty	Ogden Realty	19
Laacke and Joys	Laacke and Joys	19
Schlitz Park	Schlitz Park	20
Pere Marquette Park	Milwaukee County Parks	20
Plankinton Alley-Wells	Milwaukee DPW	21
Rockbottom Brewery/Plankinton Alley	Rockbottom/Milwaukee DPW	22
Mason Street	Milwaukee DPW	22
St. Paul Avenue/RiverWalk Park	Milwaukee DCD	23
Buffalo Street/Milwaukee Ale House	Ale House/Milwaukee DPW	23
Chicago Street	Third Ward Assoc./Condo Assn	24
Waterfront Condos	Peter Renner	24
Performance Yacht Services	Bryan Adams	25
Bruce St. Boat Ramp	Milwaukee County Parks	27
Skipper Buds/Barnacle Buds	Skipper Buds	25
Pier Milwaukee	Pier Milwaukee	26

Appendix D: Floating Step-Down Launch Designs

From Logical Lasting Launches, National Park Service Rivers & Trails Program, 2004

<http://www.nps.gov/ncrc/programs/rta/helpfultools/launchguide/5.pdf>

Example 1: Annsville Creek Paddlesport Center, Hudson River Watertrail, Hudson Highland State Park, New York

Commercially manufactured floating launches may be used in combination with other structures, such as gangways or pile launches. Wholesalers sell floating launches built of pre-fabricated modular sections that can be connected together to adapt to site specifications.

The following photos and designs portray access at Annsville Creek to the Hudson River Water Trail, a tidal river with water levels that typically fluctuate at least 4 feet between tides. Several different structures are used at this site to accommodate paddlers at different water levels: a modular polyethylene floating launch connects to a wooden floating dock that is accessible from a concrete landing on the shore via two parallel aluminum gangways. The floating launch has four kayak slots or boat slides, where paddlers can easily transition into and out of the water. The entire launch configuration is ADA accessible and is used to teach paddlers with disabilities, as well as to train instructors who teach paddlers with disabilities.

Specifications:

Floating launch: 22' wide x 30' long; structure made of 234 polyethylene polymodules (total)

Wooden floating dock: 8' wide x 30' long, connects to floating launch and two transition plates

Transition plates: Two parallel aluminum gangways, each 4' wide x 30' long, with steel handrails

Concrete landing: 4' wide x 25' long at shoreline; extends into water 42" below shoreline level

Reinforcements: Rip-rap extends from edge of concrete landing across half of gangway length

Total width of kayak slots = 16.67'

Small upright and inverted modules along outer edge of launch are vented to permit adjustment



Floating launch provides access to Hudson River at varying water levels

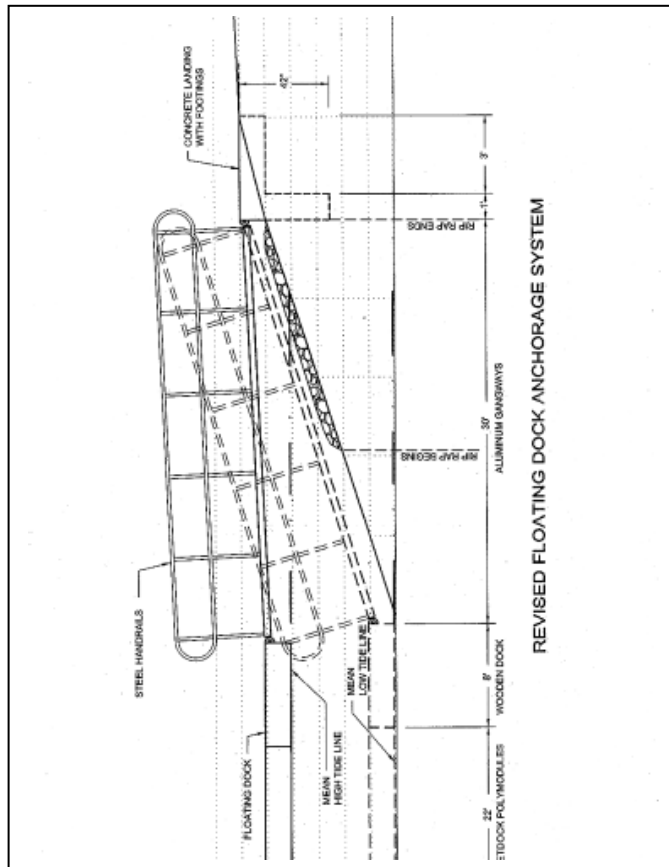


Modular polyethylene floats connect to fit site specifications

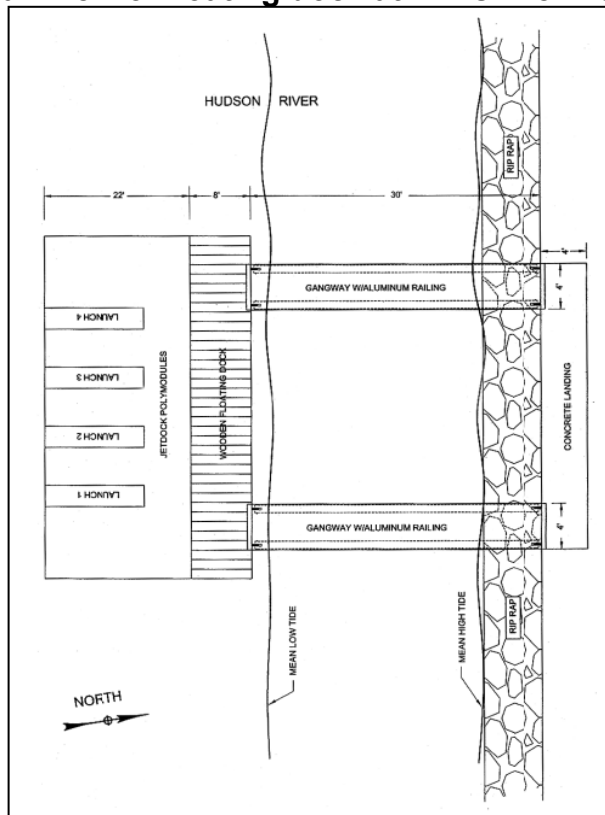


Floats in use by kayakers

Elevation of floating dock and anchorage



Plan view of floating dock at Annsville Creek



Example 2: Janes Island Kayak Dock, Dougherty Creek Canal, Janes Island State Park, Maryland

Paddlers needed an alternative launch site at a busy marina. The existing concrete boat ramp was crowded with powerboat use and hazardous to paddlers due to its slippery surface and steep incline. Since the entire shoreline is bulkheaded, there were no “soft landing” alternatives to provide paddlers with access to the water. To solve this problem, Maryland Department of Natural Resources purchased a floating 8' x 20' dock designed specifically for canoes and kayaks that attaches to bulkhead pilings with metal rings. The new launch was placed outside the entrance to the marina basin so that paddlers do not have to cross incoming and outgoing boat traffic into the basin. Paddlers access the launch from a ladder, so it is not easily accessible to those with disabilities.

Specifications:

Deck: 2' x 6' with 3" x 6" side stringers

Frame: Wood, 2' x 6' with 3" x 6" cross stringers; ¼" steel brackets reinforce outside corners

Floats: Polyethylene shell filled with foam, 8" x 20" x 72" long



Commercial floating launches and floating launch supplies

The following vendors carry floating launch products and supplies. This is not an exhaustive list and is meant only as a sampling. It is not an endorsement of these companies or their products.

- Alumidock: wide variety of floating docks, gangways, stairs -<http://www.alumidock.com>
- Connect-A-Dock: modular floating docks and platforms -<http://www.connectadock.com>
- Dock Floats Ltd.: <http://www.dockfloatsltd.com>
- Flotation Systems, Inc.: maintenance free, expandable aluminum docks - <http://www.aluminumboatdocks.com/Contact.htm>
- Galva Foam Marine Industries: <http://www.shoremaster.com/news/28.html>
- Gator Dock & Marine, INC.: aluminum floating docks - <http://www.gatordock.com>
- Jetdock: custom-made and modular floating launches - <http://www.jetdock.com>
- Johnstons Docks & Supplies: stationary and floating docks, dock kits, polyethylene floats - <http://www.dockkit.com/>
- Marina Accessibility Products, Inc.: offers a self-leveling gangway lift for physically challenged, designed specifically for floating docks - <http://www.renweb.net/website/marina/>
- Mod-U-Dock: maintenance-free, easy installation docks and floating docks with modular design and custom dock building – <http://www.modudock.com/>

- Northstar Vinyl Products, LLC: 21 polymer coated wood used in vinyl seawalls,docks, decks - <http://www.northstarvinyl.com/>
- PlasTEAK Products: uses recycled plastic - <http://www.plasteak.com/>
- TIECO Floating Structures: steel tube floating docks - <http://www.tiecomarine.com/>
- Tiger Boat Docks & Lifts: parts and plans for do-it-yourself projects - <http://www.tigerboatdocks.com/>
- Travedock: portable lightweight docks for inland waterways -<http://www.travedock.com.au>
- The Yak-A-Launcher: specifically designed for launching a kayak, or other paddle craft from a dock, pier or bulkhead - <http://www.paddlepamlico.com/YAL.htm>

Appendix E: ADA Accessible Launches

From Logical Lasting Launches, National Park Service Rivers & Trails Program, 2004
<http://www.nps.gov/ncrc/programs/rtca/helpfultools/launchguide/3.pdf>

Example: Canoe launch, Camp For All, Burton, Texas

Situated on an 8-acre lake, this launch provides access for children with disabilities. The 20' x 16' wooden structure attaches to a concrete surface on the shoreline via an aluminum gangway approximately 12' long. Two 3.5' tapered ramps allow canoes to slide up onto the launch, easing transition to the water for those in wheelchairs. A railing around the perimeter of the launch, made of double 2' x 4' wooden pieces, helps keep wheelchairs from sliding off the launch and also provides an anchoring device for boats.



Appendix F: Potential Funding Sources for Water Trail Improvements

Wisconsin Department of Administration

Wisconsin Coastal Management Grant Program (40-50% match)

*Coastal land acquisition, wetland protection and habitat restoration, nonpoint source pollution control, coastal resources and community planning, Great Lakes education, and **public access** and historic preservation.*

http://www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=250

Wisconsin Department of Natural Resources

River Protection Planning Grant (up to 75% of costs, not to exceed \$10,000)

Collect and disseminate information and create management plans for protection and improvement of riverine ecosystems.

<http://www.dnr.state.wi.us/org/caer/cfa/Grants/Rivers/riverplanning.html>

River Protection Management Grant (Up to 75% of costs, not to exceed \$50,000)

Acquire land, develop an organization and plan management strategies, educate the public, and perform environmental health assessments.

<http://www.dnr.state.wi.us/org/caer/cfa/Grants/Rivers/riverprotection.html>

Knowles-Nelson Stewardship Program (up to 50% match for eligible grantees)

Acquire land for conservation and recreation, develop recreation facilities, restore wildlife habitat, dedicate lands to develop the Ice Age National Scenic Trail.

<http://www.dnr.state.wi.us/org/caer/cfa/LR/Stewardship/NCO/nonprofit.html>

Recreation Boating Facilities (up to 50% match for eligible costs, 30% additional funding possible)

Provide safe boating facilities (ramps, parking, lighting, etc), purchase aquatic weed removal equipment and navigational aids, conduct feasibility studies, dredge waterways, and treat Eurasian water milfoil (invasive plant) in LAKES.

<http://www.dnr.state.wi.us/org/caer/cfa/Grants/recboat.html>

Recreational Trails Program (up to 50% reimbursement of total project costs)

Maintenance and restoration of existing trails, development and rehabilitation of trailside and trailhead facilities and trail linkages, construction of new trails (with certain restrictions on Federal lands), and acquisition of easement or property for trails.

<http://www.dnr.state.wi.us/org/caer/cfa/LR/Section/rectrails.html>

U.S. Fish and Wildlife Service

The National Coastal Wetlands Conservation Grant Program (Federal monies provides 50-75%, cannot exceed \$1 million)

Generally to preserve coastal environments (including the great lakes) and reduce threats to coastal resources- agricultural and urban run-off, shoreline modification, and residential and commercial development.

<http://www.fws.gov/coastal/CoastalGrants/>

Local Foundations

There are many local foundations that may support river access improvement projects, including the Greater Milwaukee Foundation, Brico Fund, Forest County Potawatomi Community Foundation, and many local family foundations.

Local Businesses/Corporations

Local corporations such as We Energies via their foundation (We Energies Foundation) have strongly supported water trails in Wisconsin. Local business improvement districts and businesses, especially riverfront businesses and outfitters, may also be great partners on developing access improvement projects.