



Water Trail Master Plan for Baltimore Harbor

August 2023

BALTIMORE BLUEWAY

Table of Contents

I. BALTIMORE BLUEWAY PLAN	1
1. Introduction	1
Why Now?.....	2
2. Planning Process.....	3
2.1 Planning Regions.....	3
2.2 Desktop and Field Assessments.....	5
2.3 Community Involvement	5
3. The Baltimore Blueway	7
3.1 Blueway Trails.....	8
4. Planning and Implementation.....	21
4.1 Safety Information.....	21
4.2 Signage/Wayfinding and Branding	22
4.3 Marketing/Website.....	25
4.4 Water Quality Monitoring and Notification.....	26
4.5 Legal Feasibility and Site Permission.....	26
4.6 Liability.....	27
4.7 Operation and Maintenance.....	27
5. Priority Projects and Next Steps	29
5.1 Access Point Priorities	29
5.2 Marketing and Promotion Priorities.....	30
5.3 Partnership Priorities.....	30
5.4 Conclusion	31
II. BLUEWAY ACCESS POINT DETAILS	32
Existing Access Points and Proposed Enhancements.....	33
Proposed New Access Points.....	41
Proposed Rest Stops.....	46
III. APPENDICES	55
Appendix A: Project Advisory Team	
Appendix B: Baltimore Blueway Supplemental Maps	
Appendix C: Baltimore Blueway Technical Feasibility Memorandum	
Appendix D: Implementation Matrix	

1. INTRODUCTION

Recreation is coming back to the waters of Baltimore. The Baltimore Blueway, a network of water trails and public access points for non-motorized craft, will connect cultural, historic, and natural sites throughout the Baltimore waterfront and promote an exciting new way to experience our city.

Imagine yourself gliding alongside historic ships, seeing the skyline from the water, paddling up to historic Fort McHenry, getting a selfie with Mr. Trash Wheel, or immersing yourself in nature, surrounded by wetlands and wildlife. Nowhere else in the Chesapeake Bay can you find such a diverse range of awe-inspiring paddling experiences within a 3-mile radius. By combining the marketing power of these attractions with outdoor recreation, the Baltimore Blueway will spur tourism and revitalization, bring together communities, and promote healthy lifestyles.

Additionally, the Baltimore Blueway will provide communities that have been disproportionately impacted by physical, social, and economic barriers with improved recreational water access and return a once highly polluted urban waterway to the residents whose tax dollars have funded its restoration.



What is a Blueway?

A Blueway is a designated route, or series of routes, that is primarily designed for small, non-motorized watercraft, such as kayaks, canoes, row boats, and stand-up paddleboards. Blueways are also called water trails or paddle trails and have well-defined public launch sites, also known as access points.

WHY NOW?

For over fifty years, leaking sewers and industrial pollution have made water quality in Baltimore's streams and harbor a recognized risk. However, thanks to a coordinated effort led by government, nonprofit, and business leaders, under the guise of the Healthy Harbor Initiative, the water is significantly cleaner today than it has been for a generation.

Trash interception technologies like the Waterfront Partnership's Mr. Trash Wheel prevent over 250 tons of litter and debris from entering the Patapsco River annually. Baltimore City has spent over \$1 billion repairing and replacing the city's aging sewer infrastructure, resulting in a 97% reduction in sewage spills since 2018 (Figure 1). This investment has led to a **dramatic reduction in bacteria levels in Baltimore waterways**. Despite these environmental improvements, physical and perceived barriers to Baltimore's waterfront persist in the form of vertical bulkheads and industrial development that make the shore intimidating or difficult to reach.

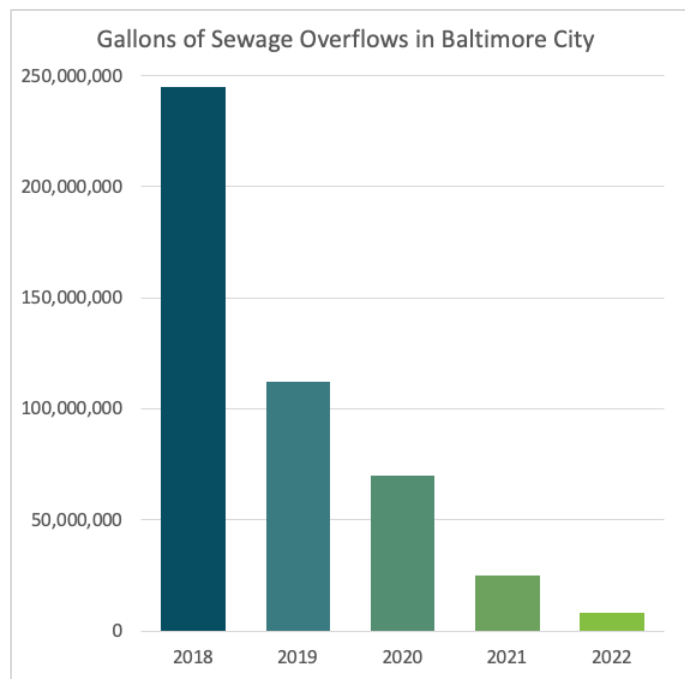


Figure 1. Reduction in Sewage Overflows
(Source: Maryland Department of the Environment)

Improving residents' access to the water allows them to engage with the natural resources of the Harbor and develop a more intimate relationship with the ecology of the Chesapeake Bay. Better access provides more opportunities for fun, lowers stress, facilitates community, and fosters a sense of stewardship for the local environment. A critical component of this Plan's success will be to create a Blueway that is accessible across neighborhoods. This includes improving existing public access and adding new public access in both the Inner Harbor and the Middle Branch. Targeted communication will increase awareness of waterfront access locations and provide information about free or low-cost kayaks and life jackets to support equitable access.

Baltimore Blueway Vision

The Baltimore Blueway Plan envisions a network of water trails and access points connecting Baltimore's Inner Harbor and Middle Branch that provides accessibility for diverse communities; is a realization of the Healthy Harbor Initiative; connects to regional trails; and enhances economic activity.

2. PLANNING PROCESS

This Plan is a culmination of a year-long project that included desktop and field analyses and stakeholder input to characterize existing and potential access points and rest stops and recommend a series of routes or trails. This process is briefly summarized below.

2.1 PLANNING REGIONS

The study area includes sections of both the Tidal and Non-Tidal Patapsco River. The sections in the Tidal Patapsco River are all located within Baltimore City. The Non-Tidal Patapsco River section includes Baltimore City, Baltimore County, and Anne Arundel County. The Patapsco River study area was further divided into four regions: (1) the Northwest Branch (which includes the Inner Harbor), (2) the Middle Branch, (3) the Main Branch, and (4) a 3-mile section of the Non-tidal Patapsco River (Figure 2).

Northwest Branch

Paddling in the Northwest Branch is a dynamic and exciting experience. This branch is characterized by high density urban development. It includes the Inner Harbor, home to some of the City's most iconic cultural institutions, museums, and parks.

It also includes the historic neighborhoods of Federal Hill, Fells Point and Canton and the relatively new neighborhoods of Harbor East, Harbor Point, and Tide Point. The Northwest Branch contains an active shipping channel, port facilities, and industrial uses including Domino Sugar. Three existing public access points are located at Canton Waterfront Park, Boston Street Pier, and Hull Street Pier.

Middle Branch

Paddling the Middle Branch is a terrific way to see local wildlife, especially birds. The area features interesting sites to explore including an abandoned marina and the historic Spring Garden Swing Bridge. It is home to Baltimore Rowing and Middle



Figure 2. Baltimore Blueway Planning Regions

Branch Park. The northern section of the Middle Branch, known as Ridgely's Cove, sits just beyond the Spring Garden Swing Bridge. The Middle Branch is a calmer branch in the study area. Defined as the area west of the Hanover Street Bridge, it sees no commercial boat traffic and very little recreational boat traffic. The Middle Branch has one public access point at Middle Branch Park.

Main Branch

The Main Branch of the Patapsco River is a larger body of water with many diverse uses. It is common to see people fishing or crabbing from the piers and bridges along the Main Branch. Masonville Cove is the country's first certified urban wildlife refuge and Fort McHenry is a trail stop for the Captain John Smith Chesapeake National Historic Trail and the Star-Spangled Banner Trail. Nick's Fish House is the only restaurant in Baltimore that is easily accessible by kayak.

This region also includes the Maryland Cruise Terminal, Maryland Port facilities, Baltimore Peninsula (formerly Port Covington), the Masonville Cove Dredge Material Containment Facility, the Vulcan Materials Company, and Medstar Harbor Hospital. Due to the diversity of uses and scale of the area, the Main Branch of the Patapsco is recommended for more experienced paddlers. It is recommended that paddlers stay along the perimeter of the Main Branch, while avoiding the cruise terminal, and exercise caution when crossing the shipping channel, especially when approaching Fort McHenry. The Main Branch is home to two public access points – Ferry Bar Park, which offers a beach for launching paddlecraft, and the Middle Branch Boat Ramp at Broening Park.

Living on the Edge

All Baltimore Blueway paddling routes are along the perimeter of the shoreline. This is first and foremost for safety. Paddlers should avoid the shipping channel, which is typically found in the middle of the Harbor. Also, if you capsize, it's easier to swim with your paddlecraft to an exit point. But the shoreline is also where you are most likely to see wildlife like birds, turtles, and crabs. So, when you're paddling the Blueway, stick to the edge!

Fetch Happens!

Wind fetch, also known as fetch length or simply fetch, is the length of water over which a given wind has blown without obstruction. The more open water the less wind it takes to make waves. That is why sections of the Blueway with more open water are recommended for more experienced paddlers and why the Inner Harbor and Middle Branch are generally calmer than the rest of the Blueway so when you're paddling in the Blueway, stick to the edge!

Non-Tidal Patapsco River

The 39-mile long Non-Tidal Patapsco River flows through sections of Carroll, Howard, Anne Arundel, and Baltimore Counties before forming the Baltimore Harbor and flowing out to the Chesapeake Bay. This 3-mile section of the river is generally calm and meandering when not being fed by a recent storm. It is lined with wetlands that provide ample opportunities to fish and view local wildlife including many species of birds and turtles.

There are many sections of the Patapsco appropriate for paddling, but there are also many barriers along the river, both natural and manmade. Southwest Area Park in Baltimore County provides easy access to this section of the Blueway via a boat ramp. The park is also accessible via the Baltimore Highlands Light Rail Station.

2.2 DESKTOP AND FIELD ASSESSMENTS

A desktop analysis leveraged a wide range of readily available geospatial data to help characterize existing and proposed access points including property ownership, proximity to parking lots and other modes of transit, and nearby amenities such as restaurants. Marine vessel traffic data¹ was used to create a heat map to visualize where boat traffic is most heavily concentrated in the Baltimore Harbor (see map in Appendix B). This data helped to inform the placement of the recommended network of trails that make up the Baltimore Blueway.

A field assessment was also conducted via boat with the goal of verifying and collecting information on existing access, new access, supportive land infrastructure, and supportive amenities. Data collected included physical condition of the access point; estimated water depth; physical constraints; and overall site suitability for a Blueway access point. Additional details on the desktop and field analysis can be found in Appendix C.

2.3 COMMUNITY INVOLVEMENT

Community input was obtained in two ways: through a volunteer Project Advisory Team and the solicitation of input/feedback from the public. The Waterfront Partnership of Baltimore convened a Project Advisory Team with representatives from the City of Baltimore and local water recreational groups. Members of the Project Advisory Team are identified in Appendix A. The Project Advisory Team provided feedback during key areas of the planning process including identification of ideal access points, attractions, and hazards.

¹ Vessel Traffic Data, 2020. Available online: <https://marinecadastre.gov/ais/>

Input from the public was obtained via a web-based survey (available in both English and Spanish) and a public input meeting to review the draft plan for the Baltimore Blueway. The survey included twelve questions focused on user experience, desires, and concerns for a future Blueway, followed by eight questions on the demographics of the survey participants. The full results of the survey can be found in Appendix C. Of the 450 total respondents, a significant majority of the respondents noted that they already paddle in the Baltimore region. The survey also collected valuable information on people who do not currently paddle and amenities that paddlers need along the Baltimore Blueway. A word cloud from the survey responses helped the team visualize the barriers to paddling in the Baltimore Harbor (Figure 3), with bigger words appearing more frequently.



Figure 3. Word Cloud Depicting Public Survey Responses to Paddling Barriers

A public meeting was held in March 2023 with approximately 100 people in attendance. Participants were broken into small groups to solicit feedback on proposed access points and trails. The feedback from the meeting was used to revise elements of the draft Plan.



3. THE BALTIMORE BLUEWAY

The interconnected access points and rest stops of the Baltimore Blueway weave throughout the Harbor and Middle Branch. These sites span a range of settings and conditions and are connected by trails planned for a variety of experiences from the urban energy of the Inner Harbor to wildlife viewing along the Patapsco River. The trails serve a variety of skill levels from beginner to advanced, depending on distance and water conditions (e.g., exposure to wind and waves).

As demonstrated by the lively participation in the public survey and meeting, there is an active paddling community in the Baltimore region. Trails and existing and proposed access points reflect the knowledge and experience of local paddlers and recommend the safest routes given what is known about boat traffic and water conditions. The Baltimore Blueway's trails encourage paddlers to stay close to shore, avoid known shallow areas, and minimize channel crossings.

The Baltimore Blueway proposed within this Plan is a snapshot of current conditions and is intended to be dynamic and adjusted as new information becomes available or opportunities arise to establish new/additional access points. For example, new shoreline developments present an ideal opportunity to add new Blueway access points.



Always Wear a Life Jacket

Always wear a life jacket when paddling the Baltimore Blueway. This applies to everyone regardless of experience, age, or fitness. No paddler can account for every variable on the water, and the life jacket can save your life even in worst case scenarios. Make sure your life jacket is certified and fitting properly before every launch.

3.1 BLUEWAY TRAILS

A Blueway Trail is a designated route along a waterway specifically designed for people to use non-motorized boats like kayaks, canoes, standup paddleboards, or rowboats. The trails, also called water trails, are the aquatic equivalent of a hiking trail (or “greenway”). Water trails feature well-developed access points; are near significant historic, environmental, or cultural points of interest; and often include nearby amenities such as restaurants, hotels, museums, or parks.



Photo Credit: Ethan Abbott

Marinas are Private Property

The Baltimore Harbor, especially the Northwest Branch, has many active marinas. When paddling, always be mindful of marina entry points and cross them quickly after checking for boats that may be trying to enter or exit the marina. Marinas are private property. Unless you have a reason to be there, please avoid paddling in them.

A water trail must:

- Be open to non-motorized watercraft;
- Include access sites that are open to the public;
- Have developed information and trail data that is publicly available and up to date (e.g., maps, guides, signage, and/or a website); and
- Be actively supported, managed, and/or maintained by at least one organization or community that can serve as the source of the water trail information.

The Baltimore Blueway, depicted in the following map, is made up of a series of interconnected trails which includes the following:

Inner Harbor Water Trails

- Inner Harbor Loop (beginner)
- Inner Harbor North Shore Trail (intermediate)
- Inner Harbor South Shore Trail (intermediate)

Middle Branch Water Trails

- Middle Branch Loop (beginner)
- Masonville Cove Trail (intermediate)
- Baltimore Peninsula Trail (intermediate)
- Fort McHenry Crossing (advanced)
- Non-tidal Patapsco River Trail (beginner)



Working Waterfront

The Baltimore Harbor is a working waterfront. While all users should “share the water,” don’t forget that paddlecraft are small and slow compared to other vessels. Even boats that may appear far away could approach faster than expected. While using the Blueway, always be on the lookout for commercial vessels, water taxis, recreational boats, and cruise ships.



ACCESS POINTS

- Current Access Point
- Proposed Access Point
- Proposed Rest Stop

TRAILS

BEGINNER

- Inner Harbor Loop
- Middle Branch Loop
- Non-Tidal Patapsco River Trail

INTERMEDIATE

- North Shore Trail
- South Shore Trail
- Baltimore Peninsula Trail
- Masonville Cove Trail

ADVANCED

- Fort McHenry Crossing

Exercise caution when crossing the shipping channel



INNER HARBOR WATER TRAILS

Inner Harbor Loop



Distance: 2 – 2.5 miles

Skill: Beginner

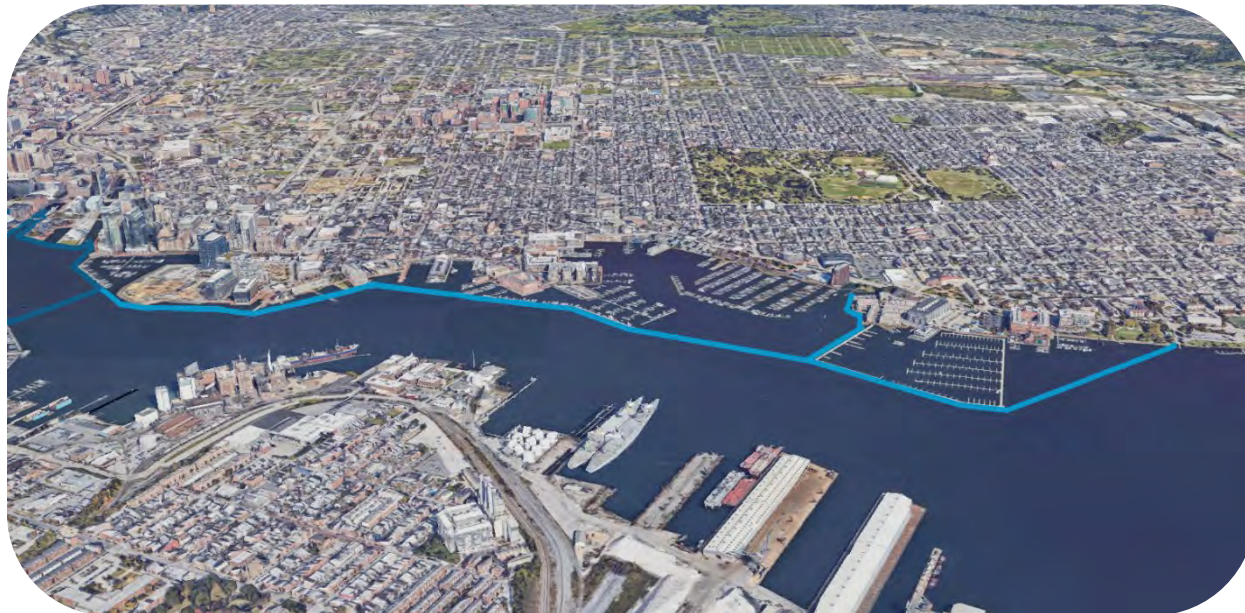
Description: The Inner Harbor Loop takes paddlers on a perimeter paddle around Baltimore’s historic and iconic Inner Harbor. In addition to getting a waterfront view of the City’s majestic skyline, paddlers will see historic ships including the USS Constellation, view iconic Baltimore landmarks like the National Aquarium, and get up close to innovative environmental projects like Mr. Trash Wheel.

The trail can be traversed clockwise or counterclockwise, but paddlers should be mindful of the channel crossing and potential conflicts with other users including the Baltimore Water Taxi, Spirt Cruise vessels, visiting ships, and recreational boaters. It is recommended that the channel be crossed at its narrowest point located between Harbor Point on the north shore and the Harborview Towers on the south shore.

Proposed Enhancements: The Inner Harbor Loop currently has no public access point. Paddlers must either use the North Shore Trail, launching from Canton Waterfront Park (2 miles east) or use the South Shore Trail, launching from Hull Street Pier (1 mile east). It is recommended that a public kayak launch be placed at Rash Field. This location would allow paddlers to load and unload equipment near the water and park on site at the Harbor Marina Garage. It is also recommended that 1-3 rest stops be provided at points of interest so that paddlers can get out, stretch their

legs, grab a bite to eat, or visit an attraction. Rest stops would also provide basic infrastructure for equipment rental companies at popular tourist destinations like Harborplace, the National Aquarium, or Harbor East. The recommended channel crossing should be marked with buoys and water-level signage should be added at points of interest. Branded wayfinding signage should be added to all access points along the trail.

Inner Harbor North Shore Trail



Distance: 2 miles

Skill: Intermediate

Description: This trail takes paddlers on a perimeter paddle along the north shore of the Northwest Branch of the Patapsco River. The trail provides connections to the Inner Harbor Loop and the Inner Harbor South Shore Trail via a channel crossing at Harbor Point. It includes the neighborhoods of Canton, Fells Point, and Harbor Point. Paddlers should exercise caution when crossing the channel and be mindful of potential conflicts with other users including the Baltimore Water Taxi, Spirt Cruise vessels, visiting ships, and recreational boaters. The middle of the Northwest Branch is an active shipping channel with commercial shipping traffic that should be avoided by paddlecraft whenever possible.

Proposed Enhancements: The Inner Harbor North Shore Trail can be accessed by Canton Waterfront Park or Boston Street Pier. While both parks offer water access, neither is ideal for launching paddlecraft. Canton Waterfront Park, with its large parking lot, public restrooms, and boat ramp has the potential to be a major trailhead for the Baltimore Blueway but needs improvements. A redevelopment plan for the park proposes a kayak beach to separate paddlecraft from recreational power boats. The trail would also benefit from public access points in the Fells Point and Harbor

Point neighborhoods. The recommended channel crossing should be marked with buoys and water-level signage should be added at points of interest. Branded wayfinding signage should be added to all access points along the trail.

Inner Harbor South Shore Trail



Distance: 1.8 miles

Skill: Intermediate

Description: The Inner Harbor South Shore Trail takes paddlers on a perimeter paddle along the south shore of the Northwest Branch of the Patapsco River. Heading west will take users to the Inner Harbor, while heading east will take them to Fort McHenry, birthplace of our National Anthem. Along the way, paddlers may see sailors honing their skills at the Downtown Sailing Center or raw sugar being unloaded beneath the iconic Domino Sugar sign.

The trail provides connections to the Inner Harbor Loop and the Inner Harbor North Shore Trail via a channel crossing at the Harborview Towers. It also connects to the Fort McHenry Crossing, which is recommended only for advanced skill levels. Paddlers should be mindful of potential conflicts with other users including the Baltimore Water Taxi, Domino Sugar, the Downtown Sailing Center, and the active marine terminals found to the east of the Baltimore Museum of Industry. The middle of the Northwest Branch is an active shipping channel with commercial shipping traffic that should be avoided by paddlecraft whenever possible.

Proposed Enhancements: The Inner Harbor South Shore Trail can currently be accessed by Hull Street Pier, but additional amenities like a kayak launch would improve accessibility. An access point should be added at the Baltimore Museum of Industry, which has the potential to be a major trailhead on the Blueway if enhanced with a designated loading/unloading zone, kayak launching beach, and wayfinding signage. The addition of a rest stop at Fort McHenry would allow paddlers to visit this historic attraction. The recommended channel crossing should be marked with buoys and water-level signage should be added at points of interest. Branded wayfinding signage should be added to all access points along the trail.

MIDDLE BRANCH WATER TRAILS

Middle Branch Loop



Distance: 2.5 miles

Skill: Beginner

Description: The Middle Branch Loop is the easiest paddling route on the Baltimore Blueway. The near total absence of powered watercraft makes this a very approachable paddle for beginners. This loop is terrific for viewing wildlife, especially birds. It is not unusual to see bald eagles, osprey, egrets, terns, and heron. Paddlers should be mindful of shallow areas including the wetlands located north of the Spring Garden Swing Bridge and Smith Cove, located in the southwest corner of the trail.

The area north of the swing bridge, known as Ridgley's Cove, is particularly enticing. The interstate overhead creates a unique cathedral-like experience, and the wetlands team with wildlife. However, Ridgley's Cove is not part of the Blueway because it can

become extremely shallow during low tides, which could strand unsuspecting paddlers on inaccessible mud flats. Paddlers should also exercise caution when visiting the abandoned sections of the Middle Branch Marina where there are multiple abandoned and sunken vessels.

Currently, the Middle Branch Park is the best way to access the Middle Branch Loop. The park includes ample free parking as well as an ADA accessible kayak launch. The Middle Branch is also home to Baltimore Rowing, the only other major recreational user of this area. The Middle Branch Loop connects to both the Baltimore Peninsula Trail and the Masonville Cove Trail.

Proposed Enhancements: The Middle Branch Loop has tremendous potential. Middle Branch Park is already the best place to launch a kayak in Baltimore, but it is underutilized. Public access would be greatly improved by adding a soft beach for launching paddlecraft. Additionally, Ridgley's Cove could be marketed as an incredibly unique paddling destination, but it needs signage warning paddlers of the dangers during low tide. Ridgley's Cove could be added to the Middle Branch Loop with the demarcation of a paddling channel, which would allow users to easily find the deeper water and avoid the shallows. Additional public access points should be added at West Port Covington Park and Westport and water-level signage should be added at points of interest. Branded wayfinding signage should be added to all access points along the trail.

Masonville Cove Trail



Distance: 2 miles to Masonville Cove (4 miles roundtrip)

Skill: Intermediate

Description: The Masonville Cove Trail is located on the Main Branch of the Patapsco River and takes paddlers to the country's first certified urban wildlife refuge. Paddlers using the Masonville Cove Trail may see anglers using the fishing piers along the Gwynns Falls Trail, egrets and heron using the Masonville wetlands, and Captain Trash Wheel, one of Baltimore's googly-eyed trash interceptors. Masonville Cove also abuts the Maryland Port Administration's Dredge Material Containment Facility.

The middle of the Main Branch is an active shipping channel with commercial traffic that should be avoided by paddlecraft whenever possible. Therefore, this is a perimeter paddle, except for the Vulcan Materials Company, which has a shipping depot on Frankfurst Avenue that should be avoided. The Masonville Cove Trail can be accessed from the Middle Branch boat ramp in Broening Park and it connects to the Middle Branch Loop, the Non-Tidal Patapsco River Trail, and the Fort McHenry Crossing. The Masonville Cove shoreline and park facilities are only open to visitors during regular operating hours, so paddlers should check www.masonvillecove.org prior to visiting. Upon arrival, all visitors are required to check in at the nature center on-site.

Proposed Enhancements: The easiest way to access the Masonville Cove Trail is via the Middle Branch boat launch at Broening Park. This park would benefit greatly from a soft beach kayak launch, wayfinding signage, and other improved amenities like a restroom and a hose bibb. As a rest stop on the Blueway, Masonville Cove would be a terrific location to launch kayak programming or rental equipment. Water-level signage should be added at points of interest. Branded wayfinding signage should be added to all access points along the trail.

Baltimore Peninsula Trail



Distance: 1.5 miles

Skill: Intermediate

Description: The Baltimore Peninsula Trail is a perimeter paddle located on the Main Branch of the Patapsco River that wraps around the Baltimore Peninsula from the Sagamore Spirit Distillery to the east to the Hanover Street Bridge to the west. Paddlers can take in the ongoing redevelopment of the former Port Covington site, explore old piers and wharves, and visit Nick's Fish House, the only restaurant in Baltimore that you can paddle up to for lunch. In the middle of this trail sits Ferry Bar Park, a small public park with an informal soft launch kayak beach. Recent redevelopment at the Baltimore Peninsula site has created a kayak launch beach access. A rental company will begin operations in Summer 2023 at this site.

The trail does not continue east to Fort McHenry to avoid paddling through the Maryland Cruise Terminal. To the west, the trail connects with the Middle Branch Loop. The middle of the Main Branch is an active shipping channel with commercial traffic that should be avoided by paddlecraft whenever possible.

Proposed Enhancements: Kayak improvements at Nick's Fish House would encourage more patronage by paddlers and improvements at Ferry Bar Park would make it a more intentional launching point for paddlecraft. Water-level signage should be added at points of interest. Branded wayfinding signage should be added to all access points along the trail.

Fort McHenry Crossing



Distance: 2 miles (actual crossing is 0.5 miles)

Skill: Advanced

Description: The Fort McHenry Crossing is located on the Main Branch of the Patapsco River and is the connecting point between the Northwest Branch Trails and the Main Stem, Middle Branch, and Non-Tidal Patapsco River trails. The Fort McHenry crossing provides paddlers with scenic views of historic Fort McHenry as well as the opportunity to view wildlife enjoying the Fort McHenry wetlands, a restoration project of the Maryland Department of Transportation. Paddlers are advised to avoid the private kayak facilities found within the Fort McHenry wetlands. There are no direct public access points to the Fort McHenry Crossing. It must be accessed by either the Masonville Cove Trail or the Inner Harbor South Shore Trail.

The Fort McHenry Crossing was carefully selected to reduce the potential for vessel conflicts with the Maryland Cruise Terminal to the north and the Masonville Cove Dredge Material Containment Facility to the south. It also provides paddlers with the shortest distance between the two sides of the shipping channel. This section is recommended for advanced paddlers. Not only are paddlers crossing a shipping channel, but this route can also be more impacted by weather conditions than other areas of the Blueway. Large swathes of open water increase the potential for big wind and big waves, while the narrow channel to the east of Fort McHenry can cause waves to reflect off the seawall back into the channel, making paddling more challenging.

Proposed Enhancements: The recommended channel crossing should be marked with buoys that make it easier for paddlers to identify the most direct path. A publicly accessible kayak launch should be added to Fort McHenry to make this historic site accessible to paddlers. Wayfinding signage should be added at Fort McHenry describing how the Baltimore Blueway connects with the National Park Services' regional trail networks including the Captain John Smith Chesapeake Bay Trail and the Star-Spangled Banner Trail. Branded wayfinding signage should be added to all access points along the trail.

Non-Tidal Patapsco River Trail



Distance: The recommended trail is a six-mile round trip, but users may choose to turn around at any point along the river."

Skill: Beginner

Description: The Non-Tidal Patapsco Trail includes sections of Baltimore City and Baltimore County with much to see and explore without having to paddle too far upstream. Analysis conducted for this report found that paddlers beginning at the river mouth typically paddle around three miles upstream and rarely venture farther than the Baltimore-Washington Parkway Bridge. Approximately 1.5 miles from the river mouth, after passing under five bridges, paddlers will find extensive tidal wetlands to explore. These wetlands are home to diverse species of birds, fish, and other marine creatures. At the mouth of the river, it is common to see people crabbing from the bridges or fishing from piers. This trail is accessible at Southwest

Area Park, which includes ample parking and a boat ramp. It can also be accessed via the Masonville Cove Trail. Despite being on the non-tidal portion of the Patapsco River, paddlers will find this section of the river to be heavily influenced by tidal conditions. Paddlers should be mindful of the river's current, especially during and after large storm events.

Proposed Enhancements: The Non-Tidal Patapsco Trail would benefit from improved kayak launching and signage at Baltimore County's Southwest Area Park. It is also recommended that kayak access be added to the Middle Branch Fitness and Wellness Center at Cherry Hill, which would allow the recreation center to incorporate paddle sports into programming for neighborhood residents. Branded wayfinding signage should be added to all access points along the trail.

4. PLANNING AND IMPLEMENTATION

This section outlines the building blocks critical for the Baltimore Blueway's success as a new program and activity in the Baltimore region.

4.1 SAFETY INFORMATION

While boating can provide hours of enjoyable leisure and exercise, safety measures are a critical part of ensuring a memorable experience. The Waterfront Partnership should facilitate and promote free/low-cost safety classes provided by the Coast Guard Auxiliary up to two times a year. Promotional materials for the Baltimore Blueway, such as signage and the website, should include the following safety tips:

Emergency Response

- In the event of an emergency, call 911.

Watch The Weather

- Check the marine weather forecast before you embark so you can be adequately prepared. If the wind is over 15 mph or there is a small craft advisory, conditions are not ideal, and paddling is not recommended.
- Dress for the weather and know the risk and symptoms of hypothermia and sun stroke.
- Be aware of potential storms and changing weather conditions.

Learn To Paddle

Whatever type of watercraft you are paddling, if you're a beginner it's a good idea to learn the basics of proper operating procedure before you strike out on your own. Knowing proper techniques will help you get the most out of your boating experience.

Stay With Your Boat

If you capsize, stay with your boat and paddle with it to shore. Power boats may have trouble seeing a person in the water, but your boat will be much easier to see. Staying with your boat will keep you visible and reduce your chances of being struck by another vessel.

Consider Water Quality

Choose your travel days with care. Wait to get out on the water until at least 48 hours after a big rainstorm. Stormwater runoff washes pollutants into the waterways and can cause sickness or infection.

Wear A Lifejacket

Always wear a properly fitted, Coast Guard approved personal flotation device. Your life jacket keeps you ready and safe. One Type I, II, III, or V life jacket on board per

person. Maryland law requires children 10 and under to always wear a life jacket on any watercraft.

Alert Someone on Land

Let a close contact know about your plans or share your float plan with someone who is staying on land.

Pack A Whistle

Maryland law requires that vessels under 40 feet long carry a whistle or horn that's audible for 2 seconds (applies to paddle boarders, too!).

Share The Waterways

Baltimore Harbor and adjacent waterways are centers of commercial and leisure activity. Follow the “rules of the water” and share the waterways with other watercrafts.

- All vessels STAY CLEAR of freighters, barges and dredging operations.
- Paddlers must STAY CLEAR of and defer to power-driven craft.
- Paddlers should STAY OUT of the middle of the channel.
- Paddlers should only cross the channel in a straight line or 90-degree angle.
- Small power craft DEFER to larger power craft, or less maneuverable craft.
- Small power craft should use the middle of the channel.
- All craft DEFER to sailboats under SAIL.

Don't Drink and Paddle

Boating, paddling, and drinking don't mix. Maryland has a Boating Under the Influence (BUI) law which prohibits operating any watercraft while under the influence. A Blood Alcohol Concentration (BAC) of 0.08% or more is considered under the influence in Maryland. Stay sober and stay safe.

Take Only Photos, Leave Only Wake

Be a good steward of the water. Don't litter or leave a mess for other boaters. At best it's a nuisance, at worst it could seriously harm or kill wildlife.

4.2 SIGNAGE/WAYFINDING AND BRANDING

To use a trail system, users need to be able to find it and know where it goes. Wayfinding is a system of signs and maps that mark how to use and stay on a trail. Developing a brand for the project helps users recognize its elements are part of one system. The Baltimore Blueway has developed a logo for this intent.



**BALTIMORE
BLUEWAY**

As one of its first tasks, the Baltimore Blueway should establish branded signage at all existing access points to begin to give the Baltimore Blueway a visible identity. Future access points and rest stops should include the same branded elements. An example of potential wayfinding signage is included in Figures 4 – 6.

Several different sign types may be considered for the Baltimore Blueway:

- Ground signs identify site locations found on a map.
- Directional signs direct users to amenities or boat launches.
- Trailhead kiosks display maps, park rules, or weather and water conditions.

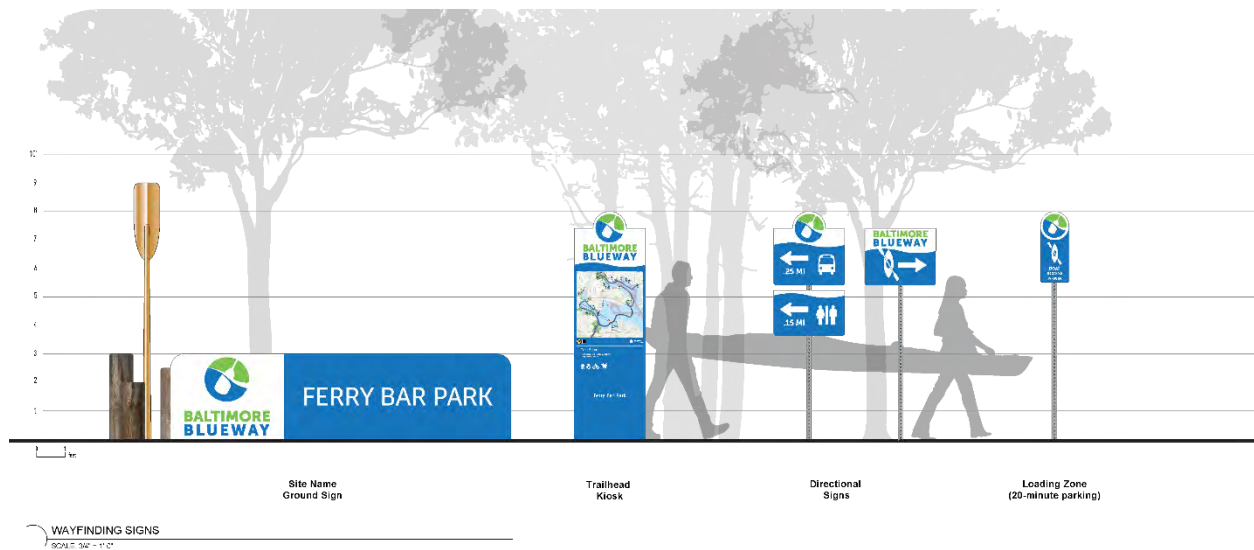


Figure 4. Types of Recommended Blueway Signage



Figure 5. Example of Wayfinding at a Beach Launch Access Point

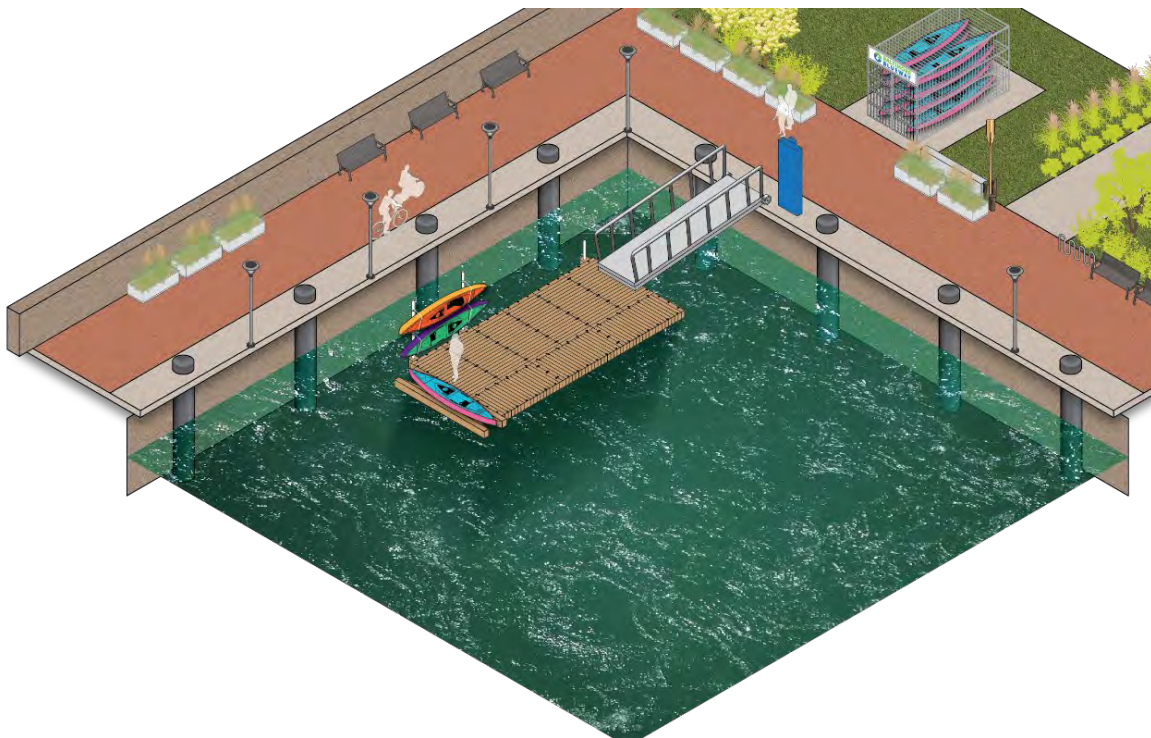


Figure 6. Example of Wayfinding at a Bulkhead Launch Access Point

Ground sign - A site-name label should be visible from the land approach, and ideally from the water too. Choose a highly visible location for the primary ground sign. It should be public facing, unique, aesthetically appealing, capture people's attention, and contribute to the public realm.

Secondary site-name signs – These help paddlers locate the site from the water. Be sure to consider the elevation of the sign and the eye level of a paddler on the water to be sure it can be seen. Signs should not be blocked by vegetation or block views themselves. Choose the height of the letters based on the distance from which you would like it to be visible. The size of the sign should be proportional to the size of the text.

Directional sign – A sign with logos and arrows points users to the amenities they need such as restrooms, water access, or transportation. Text should be used sparingly. Limited information allows the logos and graphics to be as large as possible on a small sign and limits the clutter to the site.

Trailhead kiosk – An information-gathering kiosk allows paddlers to see the map and know relevant conditions. Future users may visit it to plan their trip. A pylon shape is recognizable as an information hub around downtown districts and shopping centers. If maps are available online, it may make sense for the kiosk to link to digital sources so maps, water quality, and weather conditions can be updated.

Paddler access sign – In an urban setting, pavement and parking is not always available adjacent to the water. Reserving spaces in priority locations could increase the convenience of paddling. Like an EV space or passenger loading zones, paddler access signs reserve 20 minutes for loading and unloading of equipment for paddlers. Signage should be consistent across access sites. They should be the same materials, color palette, and font as the Baltimore Blueway brand. Signs should be maintained and be free of scratches and evidence of vandalism to maintain respect for the access site.

4.3 MARKETING/WEBSITE

Promoting the Baltimore Blueway will help to garner enthusiasm, community engagement, and attract visitors. It will be important to create a marketing and communications plan as well as a design guide for all promotional materials and signage.

To realize the full potential of the Baltimore Blueway, the public needs to be aware that it exists and know how to access it. Local officials and businesses should be made aware of the Baltimore Blueway, the experiences it offers, and how they can become involved. Some common tools and strategies for marketing the Baltimore Blueway and communicating important information include:

- Create and regularly update a Baltimore Blueway website.

- Use social media to post user photos and share stories about the Baltimore Blueway's success.
- Celebrate the Baltimore Blueway with special events, programming, and educational opportunities.
- Publish maps to keep users safe and informed.

Communications should also make the connection with other overlapping/nearby water trails and terrestrial trails, such as the Promenade. Two water trails, the Captain John Smith Chesapeake National Historic Trail and the Star-Spangled Banner Trail, underscore the rich history of Baltimore City and surrounding areas and bring another element of interest to the Baltimore Blueway.

A Baltimore Blueway website should be established and include an interactive map that displays Blueway access points and trails. The interactive map should be useable via a personal computer and a smart phone. A website should also include additional information:

- Latest water quality data
- Weather forecast, including high/low tides and sunrise/sunset times
- Safety tips
- Upcoming events including safety training sessions

4.4 WATER QUALITY MONITORING AND NOTIFICATION

The Baltimore Harbor is an urban waterway surrounded by impervious surface. When it rains, pollution is rapidly transported from the streets, alleys, and sidewalks into storm drains that flow directly into our streams and Harbor. The Maryland Department of the Environment has identified fecal bacteria as a pollutant of concern for human health and set a threshold for how much bacteria may be in a body of water before it is considered impaired for recreational use.

In Baltimore, bacteria levels in our streams and Harbor are typically within safe levels unless it has recently rained. It is recommended that users avoid recreating in all waters of the Chesapeake Bay within 48 hours of a rain event of a half inch or more. Sources of bacteria include animal feces from cats, dogs, and local wildlife as well as from leaks or overflows from the City's sewer system. Water quality in the Baltimore Harbor is monitored by Baltimore City, the Maryland Department of Natural Resources, and multiple non-profit organizations. During the 2023 recreation season, Waterfront Partnership monitors bacteria concentrations at five sites in the Inner Harbor daily (Monday thru Friday) and posts the results within 24 hours to www.theswimguide.org. It is recommended that water quality monitoring results be incorporated into the Baltimore Blueway website.

4.5 LEGAL FEASIBILITY AND SITE PERMISSION

A water trail is made up of access sites with a variety of ownership types and easement status. The Waterfront Partnership of Baltimore will not own access sites but will rely on agreements with property owners or managers to achieve a network.

An access site may become part of the Baltimore Blueway if:

- the property owner or manager wants to join the Baltimore Blueway,
- the facilities are or will be made open to the public by Memorandum of Understanding or easement,
- the site has a launch or resting areas (rest stop) that can be used by canoe or kayaks,
- the launch site does not clearly impact sensitive habitat, or interfere with private property rights or industrial operations, and
- the site does not present inherently dangerous conditions to the public.

Where a property owner voluntarily adds a Baltimore Blueway access point (e.g., redevelopment of a waterfront area), in most cases, the property owner or manager will operate and maintain the site. Hybrid responsibilities may be arranged where the Waterfront Partnership of Baltimore has a legal agreement with the property owner to establish a new access point.

Periodic reviews of the site should be conducted to ensure it meets the criteria of the Baltimore Blueway by the Waterfront Partnership of Baltimore. The sites should be free from unnaturally occurring debris, signs should be erect, and launches should be in good, suitable condition.

Since site participation is voluntary, the access point locations will continue to evolve over the years as negotiations progress and opportunities arise. Additional information on legal feasibility can be found in Appendix C.

4.6 LIABILITY

Property owners thinking about participating in the Baltimore Blueway may have hesitations from a legal perspective about permitting the public onto their property. The Maryland Recreational Use Statute encourages owners to allow the public permission onto private land, water, or airspace for recreational or educational purposes. The act (Natural Resources Article § 5-1101) limits the owner's liability and places the onus on the user to exercise care while on the site. Baltimore Blueway participants would be afforded this level of coverage. Additional liability protection could be negotiated through a memorandum of understanding (MOU) or other legal arrangements required for entering the Baltimore Blueway.

Paddlers will be advised to contact 911 in the event of an emergency via Baltimore Blueway signage and website.

4.7 OPERATION AND MAINTENANCE

Where a property owner voluntarily adds a Baltimore Blueway access point (e.g., redevelopment of a waterfront area), in most cases, the property owner or manager will operate and maintain the site. Hybrid responsibilities may be arranged where the Waterfront Partnership of Baltimore has a legal agreement with the property owner to establish a new access point. To ensure the success of sites once an access point is

operational, the Waterfront Partnership of Baltimore will want to keep an updated list of the agreements and site contacts for each site.

On a regular basis, the Baltimore Blueway program managers should check in with the site contacts. This re-establishes the connection to the program and provides an opportunity to verify if contact information or maintenance roles have changed since the previous recreational season.

Items that the property owner or manager could potentially be asked to provide to the Waterfront Partnership or Baltimore:

- Property owner/manager name and contact information
- Changes or updates to the management plan (routine repairs, waste collection)
- Core volunteers and duties
- Maintenance equipment needs
- Periodic maintenance events (trash clean-ups)
- Site-specific information to add or remove from the website

The Baltimore Blueway is only as healthy as its access sites. The Waterfront Partnership of Baltimore is invested in the success of these sites and consistent communication with site contacts can help ensure that sites are well maintained.

5. PRIORITY PROJECTS AND NEXT STEPS

This plan is a snapshot of current conditions and is intended to be dynamic and adjusted as new information becomes available or opportunities arise to establish new/additional access points. For example, new shoreline development presents ideal opportunities to add new access points along the Blueway trails. Additional details regarding priorities and planning level cost estimates for proposed site improvements can be found in Appendix D.

5.1 ACCESS POINT PRIORITIES

1. **Build an Inner Harbor kayak launch** – The Baltimore Blueway offers so many things to see and do, but nowhere are the attractions more exciting and in closer proximity to one another than in the Inner Harbor. In fact, there's so much to see that finding space for a kayak launch can be a challenge. The Blueway Plan has identified the promenade adjacent to Rash Field as the most suitable location due to its onsite parking and accessible loading/unloading area.
2. **Remodel the Middle Branch boat launch** – The Middle Branch connects the historically underserved communities of Brooklyn and Cherry Hill to the waterfront. The existing boat ramp and fishing piers located at Broening Park are in dire need of repair and replacement. It is recommended that a beach launch be added to the park to separate paddlers from motorized craft using the boat ramp.
3. **Add kayak amenities to Water Taxi docks** – The Baltimore Waterfront has ten water taxi stops owned by the Baltimore City Department of Transportation. Many stops include piers and floating docks that could be adapted to accommodate paddlers. In fact, many paddlers already use water taxi stops. Just as city streets provide separate lanes for vehicles and bicycles, creating designated launching areas at water taxi stops would separate these uses while supporting multiple forms of transportation.



4. **Add a kayak beach to Canton Waterfront Park** – Providing a soft beach at Canton Waterfront Park would allow paddlers to more easily get on and off the water while improving safety by separating them from the motorized craft using the boat ramp.

5.2 MARKETING AND PROMOTION PRIORITIES

1. **Create a Baltimore Blueway website** – The Baltimore Blueway is an opportunity to brand and market paddling in the Baltimore Harbor while providing important safety information to paddlers. A compelling website will increase use of the Blueway by providing information about existing water trails and access points while also promoting the larger Blueway vision. The website should also provide timely updates on water conditions.
2. **Install branded wayfinding signage at existing kayak launches** – Each access point along the Baltimore Blueway should have prominent signage installed that identifies it as part of the Blueway and provides important information to users including safety information and wayfinding instructions for the Blueway trails and nearby attractions.

5.3 PARTNERSHIP PRIORITIES

1. **Provide facilities for rental companies** – To ensure easy access to paddlecraft, equipment rental companies are needed. Providing basic infrastructure such as bathrooms, kayak launches, kiosks, and storage at highly trafficked areas along the waterfront will entice rental companies to locate on the Blueway.



Photo Source: Rent.Fun

2. **Make Fort McHenry accessible by paddlecraft** – Fort McHenry is already one of the most popular paddle destinations in Baltimore. While it's easy to paddle around Fort McHenry, it's not currently possible to dock and visit the site. The Blueway Plan envisions Fort McHenry as the connecting point between the Baltimore Blueway and the national Chesapeake Bay water trail network, including the Captain John Smith Chesapeake National Historic Trail and the Star-Spangled Banner Trail. This will involve building infrastructure for launching kayaks and providing rental equipment during the park's regular operating hours.



3. **Bring paddle sports to the Middle Branch Fitness and Wellness Center** – This newly constructed recreation center in Baltimore’s Cherry Hill neighborhood sits on the banks of the Patapsco River but does not currently provide access to the river. River access would help connect Cherry Hill residents to the river and the many miles of nature-filled wetlands that line its shores. The Center could also provide programming on the river to teach residents how to paddle and use the Blueway.

5.4 CONCLUSION

The Baltimore Blueway will promote public access, public health, tourism, art and culture, and environmental stewardship. Bringing it to life will take vision, collaboration, and funding. The list of potential project partners presents a diverse set of significant funding and partnership opportunities that a closely coordinated regional effort could secure and leverage. Waterfront Partnership is committed to leading this effort, but it will take leadership and partnership at all levels. Studies throughout the country show the strong economic impacts that Blueways have had on visitor spending on entertainment, accommodations, restaurants, and retail. With significant investment, the Baltimore Blueway will open the door to multiple local, regional, and federal resources that will both enhance the experience and multiply the impact of the investment. The Baltimore Blueway launches an exciting new opportunity for our city, state, and region. Together, we will bring water recreation back to the Baltimore waterfront.

BLUEWAY ACCESS POINT DETAILS



EXISTING ACCESS POINTS AND PROPOSED ENHANCEMENTS

Existing access points are sites where paddlers currently have access due to physical conditions (ability to safely get in and out of the water) and ownership (public and/or easement in place). Until additional access sites are added, the following seven sites are the foundation of the Baltimore Blueway.

CANTON WATERFRONT PARK



Site Summary

- Address: 3001 Boston Street
- Existing Launch Type: Boat Ramp
- Ownership/Easement: Public (City)
- Parking: Onsite Lot (apx. 45 spaces)

Amenities

- Benches/Seating
- Picnic Area
- Trash Can(s)
- Restrooms

- Nearby Restaurant(s)

Connections

- Inner Harbor Promenade
- Baltimore Water Taxi

Proposed Improvements

- Soft Launch Beach
- Designated Loading/Unloading Area
- Public Kayak Storage
- Hose Bibb
- Improved Restrooms
- Wayfinding Signage

HULL STREET PIER



Site Summary

- Address: Hull Street
- Existing Launch Type: Floating dock with gangway
- Ownership/Easement: Private, Completed Promenade Easement
- Parking: On-street (apx. 18 spaces)

Amenities

- Benches/Seating
- Hose Bibb
- Wayfinding Signage

- Picnic Area
- Trash Cans

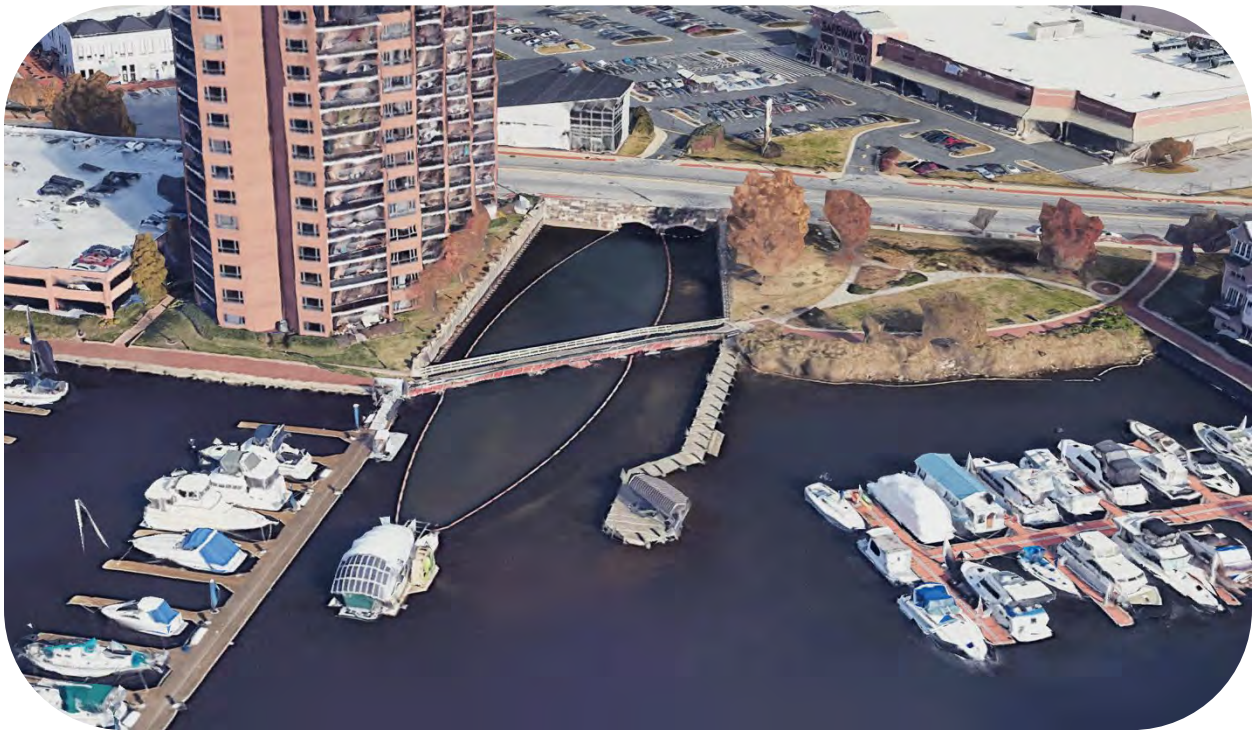
Connections

- Baltimore Water Taxi

Proposed Improvements

- ADA Compliant Kayak Launch Area
- Designated Loading/Unloading Area
- Restrooms
- Public Kayak Storage

BOSTON STREET PIER



Site Summary

- Address: 2600 Boston Street
- Existing Launch Type: Fixed Pier
- Ownership/Easement: Public
- Parking: On-street (apx. 5 spaces)

Amenities

- Benches/Seating
- Picnic Area
- Trash Cans
- Nearby Restaurant(s)

Connections

- Inner Harbor Promenade

Proposed Improvements

- Designated Loading/Unloading Zone
- Kayak Lift or ADA Compliant Launch
- Public Kayak Storage
- Hose Bibb
- Wayfinding Signage

MIDDLE BRANCH PARK



Site Summary

- Address: 3301 Waterview Ave
- Existing Launch Type: ADA Compliant Floating Dock with Gangway
- Ownership/Easement: Public
- Parking: Onsite Lot (apx. 75 spaces)

Amenities

- ADA Compliant Kayak Launch
- Designated Loading/Unloading
- Restrooms

- Benches/Seating
- Picnic Area

Connections

- Gwynns Falls Trail and Bike Path

Proposed Improvements

- Soft Launch Beach
- Trash Cans
- Public Kayak Storage
- Improved Restrooms
- Hose Bibb
- Wayfinding Signage

BROENING PARK



Site Summary

- Address: 3001 East Drive
- Existing Launch Type: Boat Ramp and Fixed Pier
- Ownership/Easement: Public
- Parking: Onsite Lot (apx. 175 spaces)

Amenities

- Designated Loading/Unloading
- Trash Can(s)
- Picnic Area
- Connects the Gwynns Falls Trail

Connections

- Gwynns Falls Trail and Bike Path

Proposed Improvements

- Soft Beach Launch, ADA Compliant Kayak Launch, Rub Rails, or Kayak Lift
- Restrooms
- Benches/Seating
- Public Kayak Storage
- Hose Bibb
- Wayfinding Signage

FERRY BAR PARK



Site Summary

- Address: 2700 Light St
- Existing Launch Type: Soft Beach Launch
- Ownership/Easement: Public
- Parking: On-street (apx. 20 spaces)

Amenities

- Benches/Seating
- Picnic Area
- Designated Loading/Unloading
- Trash Can(s)
- Nearby Restaurant(s)

Connections

- None

Proposed Improvements

- Natural Matting Boat Ramp or Dedicated Kayak Beach Launch Area
- Designated Loading/Unloading Area
- Restrooms
- Public Kayak Storage
- Hose Bibb
- Wayfinding Signage

BALTIMORE PENINSULA



Site Summary

- Address: 101 East Cromwell St
- Existing Launch Type: Beach shoreline
- Ownership/Easement: Private ((301 East Cromwell Street, LLC)
- Parking: Onsite Lot (apx. 45+ spaces)

Amenities

- Picnic Area

- Nearby Attraction(s)

Connections

- Harbor Connector

Proposed Improvements

- Designated Loading/Unloading Zone
- Public Kayak Storage
- Trash Can(s)
- Wayfinding Signage

SOUTHWEST AREA PARK



Site Summary

- Address: 3939 Klunk Drive
- Existing Launch Type: Boat Ramp and Fixed Pier
- Ownership/Easement: Public (Baltimore County)
- Parking: Onsite Lot (apx. 35 spaces)

Amenities

- Designated Loading/Unloading

Connections

- Light Rail (0.7 mile walk from boat ramp)

Proposed Improvements

- Rub Rails affixed to Boat Ramp, Kayak Launch, or Soft Beach Launch
- Benches/Seating
- Picnic Area
- Trash Can(s)
- Restrooms
- Public Kayak Storage
- Hose Bibb
- Wayfinding Signage

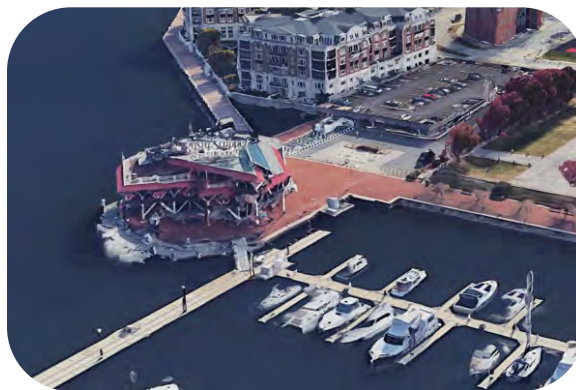
PROPOSED NEW ACCESS POINTS

Proposed Access Points are identified as additional elements of the Baltimore Blueway and should be implemented as opportunities and resources become available. These sites will create a more comprehensive Blueway with access points at regular intervals throughout the Baltimore Harbor. A map showing the distance between existing and proposed access points is included in Appendix B and underscores the importance of continuing to populate Baltimore Blueway access points to improve safety and community access. Proposed Access Points are described below and summarized in Table 1.

Proposed Access Points are sites that lack basic paddler access infrastructure (i.e., the ability to easily launch a kayak from the shoreline) and/or do not have public access. Shoreline ownership and easement status is depicted in Appendix B.

INNER HARBOR KAYAK LAUNCH

The Inner Harbor offers a paddling experience that is unparalleled in the region. With the historic ships, the skyline, the visiting vessels, the floating wetlands at the National Aquarium, and Mr. Trash Wheel, a kayak launch in the Inner Harbor is an essential component of the Baltimore Blueway. It would also be an economic driver for tourism as well as the paddlecraft rental industry. However, there are significant challenges to installing a kayak launch in this highly urbanized and bulkheaded shoreline.



A publicly accessible kayak launch would require parking and a designated loading and unloading area. The only Inner Harbor site that potentially meets these requirements is Rash Field near the Rusty Scupper. The Marina Garage offers paid parking and a potential loading area near the water's edge. The nearby Inner Harbor Marina is city-owned and a potential partner for improving public access at this location.

BALTIMORE MUSEUM OF INDUSTRY KAYAK LAUNCH

The Baltimore Museum of Industry is a private property with a public easement for waterfront access. It is home to the Downtown Sailing Center and already utilized as an informal kayak launch due to its ample parking and small soft shoreline. Formalizing this area as an official kayak launch would bring more people to the Museum of Industry and offer easy paddle access to much of the Inner Harbor. Launching from this location offers terrific views of the iconic Domino Sugar sign and the wreck of the *Governor R. M. McLane*.



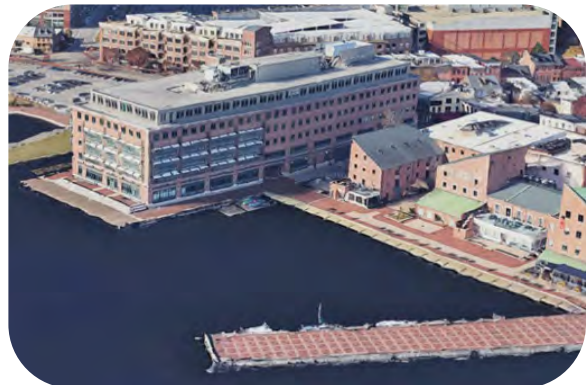
HARBOR POINT KAYAK LAUNCH

Harbor Point is a private property with a public easement for waterfront access. The property sits on a former super-fund site and is currently undergoing intense redevelopment. A publicly accessible kayak launch has been included in the redevelopment plans. Due to the riprap shoreline, a floating dock with a gangway is recommended. Launching at Harbor Point may require more skill due to the exposed nature of the site. Paid parking is available nearby, however, due to the ongoing development it is unclear what sort of loading/unloading area will be provided.



BOND STREET WHARF KAYAK LAUNCH

Bond Street Wharf in Baltimore's historic Fells Point neighborhood is home to a kayak launch owned and operated by the Canton Kayak Club. Unfortunately, the kayak launch has reached the end of its useful life. The launch is located on private property with a public easement for waterfront access and could be converted to a publicly accessible launch. There is limited nearby street parking, but the site's proximity to shops and restaurants makes it an ideal stop along the Baltimore Blueway. It is recommended that temporary kayak storage be provided to encourage paddlers to park their boats and visit all that Fells Point has to offer.



WEST COVINGTON PARK KAYAK LAUNCH

West Covington Park is a privately owned publicly accessible park in the Middle Branch. Purchased from the city by the National Aquarium in 2007, it was then sold to the developers of Baltimore Peninsula in 2016. The park currently offers sweeping views of the Middle Branch, ample parking, and a fish pier. The park is the ideal location for a public kayak launch along the north shore of the Middle Branch. However, the riprap shoreline would need to be addressed either through a gangway and floating dock configuration or the creation of a soft beach launch.



WESTPORT KAYAK LAUNCH

Westport is a private property that currently has no water access. Future development plans for the property include hundreds of residential units as well as retail and office buildings. The development plans also include a new boat house and publicly accessible pier making this the ideal location for a west shore access point on the Middle Branch.



MIDDLE BRANCH FITNESS AND WELNESS CENTER KAYAK LAUNCH

Located in Baltimore's Cherry Hill neighborhood, Reedbird Park is home to The Middle Branch Fitness and Wellness Center at Cherry Hill, the city's largest recreation center. Opening in 2022, the recreation center sits on the banks of the Non-Tidal Patapsco River. There currently is no water access, though there is an unmaintained dock. Residents of Cherry Hill have been disproportionately affected by physical, social, and economic barriers. Reconnecting the community with access to the Patapsco River would increase the social and physical health of residents and provide them with easy access to the wetlands and natural habitats that line this section of the Patapsco River



Table 1. Summary of Proposed New Access Points

Site Name	Existing Shoreline/ Launch Type	Ownership/ Easement Status	Amenities	Partnership/ Access Needs	Proposed Improvements
Baltimore Museum of Industry	Beach Shoreline	Private, with easement (BMI)	<ul style="list-style-type: none"> • Parking Lot (apx. 90 spaces) • Benches/Seating • Picnic Area • Trash Can(s) 	Legal agreement with BMI	<ul style="list-style-type: none"> • Shoreline/Site Improvements • Designated Loading/Unloading Zone • Public Kayak Storage • Hose Bibb
Bond Street Warf	Floating Dock with Gangway	Private, with easement (Bond Street Warf, LLC)	<ul style="list-style-type: none"> • Limited on-street; Parking Lot (apx. 100 spaces) • Benches/Seating • Picnic Area • Nearby Restaurant(s) • Trash Can(s) 	Legal agreement with property owner	<ul style="list-style-type: none"> • Kayak Launch with Gangway • Designated Loading/Unloading Zone • Public Kayak Storage
Harbor Point	Floating Dock with Gangway	Private, with easement (Harbor Point Parcel 4 Hotel, LLC)	<ul style="list-style-type: none"> • Parking Garage (apx. 90 spaces) • Benches/Seating • Trash Can(s) • Nearby Restaurant(s) 	Promote as part of redevelopment	<ul style="list-style-type: none"> • Kayak Launch with Gangway • Designated Loading/Unloading Zone
Inner Harbor	Floating Dock	Public, with easement (City)	<ul style="list-style-type: none"> • Parking Lot (apx. 180 spaces) • Benches/Seating • Picnic Area • Nearby Restaurant(s) 	Promote as part of redevelopment	<ul style="list-style-type: none"> • ADA Compliant Kayak Launch with Screw Piles • Designated Loading/Unloading Zone • Public Kayak Storage • Hose Bibb
Middle Branch Fitness & Wellness Center	Fixed Pier	Public (City)	<ul style="list-style-type: none"> • Parking Lot (apx. 12 spaces) • Loading/Unloading Zone • Picnic Area 	Legal agreement with property owner	<ul style="list-style-type: none"> • Kayak Lift • Trash Can(s)

Table 1. Summary of Proposed New Access Points

Site Name	Existing Shoreline/ Launch Type	Ownership/ Easement Status	Amenities	Partnership/ Access Needs	Proposed Improvements
West Covington Park	Rip Rap Shoreline	Private (101 West Cromwell Street, LLC)	Parking Lot* Benches/Seating Picnic Area	Legal agreement with property owner	ADA Compliant Kayak Launch Trash Can(s)
Westport	Rip Rap Shoreline	Private (Westport Capital Development)	On-street parking (apx. 55 spaces)	Promote as part of redevelopment	<ul style="list-style-type: none"> • ADA Compliant Kayak Launch • Parking Lot • Designated Loading/Unloading Zone • Public Kayak Storage • Trash Can(s)

PROPOSED REST STOPS

Rest Stops include sites where paddlers can stop along the way to enjoy site amenities such as a picnic area or restaurant. Rest Stops tend to have limited parking available, and it is assumed that paddlers would temporarily anchor or store their personal watercraft while taking a break or visiting a nearby destination such as a restaurant. One such option for kayak storage at Rest Stops includes kayak lockers that can be rented and unlocked via a smartphone app. Rest Stops are placed at points of interest and are typically ideal location for rental facilities, which would eliminate the need to transport paddlecraft.

HARBORPLACE

Harborplace, the heart of Baltimore City, is currently undergoing redevelopment and sure to become a major regional tourist destination once again. Providing a rest stop here will allow paddlers to patronize the shops, restaurants, and other attractions while also providing a prime location for a future equipment rental business.

NATIONAL AQUARIUM

The National Aquarium is the largest tourist attraction in the state of Maryland. The waterways surrounding the aquarium are currently being redeveloped with innovative floating wetlands that will recreate a Chesapeake Bay wildlife habitat in the heart of the City. A rest stop here would allow paddlers to visit the Aquarium and view the floating wetlands from both land and sea.

HARBOR EAST

Harbor East features high-end retail and dining experiences and is also home to many major hotel chains including the Marriott, Four Seasons, and Hilton. Tourists staying at these hotels are always looking for activities and a Harbor East kayak launch would be an ideal location for a paddle equipment rental facility. Harbor East is also home to the world-famous Mr. Trash Wheel, a googly-eyed trash interceptor that helps to keep the Harbor clean.

FORT MCHENRY

Fort McHenry is the only National Monument and Historic Shrine in the National Park Service. Birthplace of the National Anthem, it is already one of the most popular destinations for paddlers in Baltimore. A rest stop at this location would allow paddlers to plan a day spent paddling to the Fort, picnicking on the grounds, and exploring the site. Fort McHenry is also a stop along the John Smith Chesapeake Bay National Historic Trail and the Star-Spangled Banner Trail. Once this rest stop is available, users of a Fort McHenry rest stop should be mindful of the park's operating hours.

MASONVILLE COVE

Masonville Cove is the nation's first certified urban wildlife refuge. It has docks, nature trails, programming, and is home to Captain Trash Wheel. It would make an ideal paddling destination for an urban dweller seeking a day in nature. Visitors to Masonville Cove should be mindful of the park's operating hours and always check-in at the Environmental Education Center upon arriving.

Table 2. Summary of Proposed Rest Stops

Site Name	Existing Shoreline/ Launch Type	Ownership/ Easement Status	Amenities	Partnership/ Access Needs	Proposed Improvements
Fort McHenry	Floating Dock with Gangway (Water Taxi Stop)	Public (NPS)	<ul style="list-style-type: none"> • Benches/Seating • Picnic Area • Nearby Attraction(s) 	Continue discussions with NPS	<ul style="list-style-type: none"> • Kayak Storage Lockers
Harborplace	Fixed Pier	Public, with easement (City)	<ul style="list-style-type: none"> • Benches/Seating • Picnic Area • Nearby Restaurant(s) • Nearby Attraction(s) • Restrooms • Trash Cans 	Promote as part of redevelopment	<ul style="list-style-type: none"> • Kayak Storage Lockers
Masonville Cove	Floating Dock with Gangway	Public (State)	<ul style="list-style-type: none"> • Picnic Area 	Continue discussions with Port of Baltimore	<ul style="list-style-type: none"> • ADA Compliant Kayak Launch • Kayak Storage Lockers
Harbor East	Floating Dock with Gangway	Public, with easement (City)	<ul style="list-style-type: none"> • Benches/Seating • Trash Can(s) • Nearby Restaurant(s) • Nearby Attraction(s) 	N/A	<ul style="list-style-type: none"> • ADA Compliant Kayak Launch • Kayak Storage Lockers
National Aquarium	Fixed Pier with Gangway (Water Taxi Stop)	Public, with easement (City)	<ul style="list-style-type: none"> • Benches/Seating • Trash Can(s) • Nearby Restaurant(s) • Nearby Attraction(s) 	Coordinate with City; Legal agreement with Ntl Aquarium	<ul style="list-style-type: none"> • Kayak Storage Lockers

ACCESS TYPOLOGIES

Four main existing shoreline types occur along the Baltimore Harbor: boat ramps, bulkheads, natural shorelines, and riprap shorelines. The Northwest Branch is primarily hard edged and the Middle Branch and Main Branch soft edged. In the Middle Branch, the shoreline condition will be preserved and made public access via the expanded Waterfront Overlay District zoning, (Article 32 § 12-207).

Some of the access points can be used in their existing form, but many would benefit from upgrades to improve accessibility and encourage greater paddler use. A range of upgrades, by shoreline type, were developed to assist with future project and budgetary planning. Alternatives are organized by generalized level of cost and level of effort for installation and are summarized in Table 3.

Table 3. Shoreline Type Improvement Alternatives to Improve Paddler Access

Shoreline Type	Alternative 1 (\$)	Alternative 2 (\$\$)	Alternative 3 (\$\$\$)
Boat Ramp	Signage legitimizing canoe/kayak use	Lumber rub rails	None; use adjacent bulkhead, dock, or pier to add ADA floating dock launch
Bulkhead	Ladder in good condition; add cleats for tethering	Kayak lift	Gang plank to ADA floating dock launch
Natural Shoreline (<8% typ.)	Level grade; eliminate foreign debris	Natural matting and shore-grass establishment	Permanent ramp with rollers to ADA floating dock launch
Riprap Shoreline (>8% typ.)	None; cannot be used as is	Precast concrete steps	Permanent ramp with rollers to ADA floating dock launch

*\$ is less costly than \$\$\$.

BOAT RAMP

Concrete boat ramps occur in the Middle Branch Park and Canton Waterfront Park. A canoe or kayak user can enter a boat perpendicularly by side stepping in, but it takes balance, practice, and an able body to avoid scratching the bottom of the boat or tipping over.

Alternative 1 (\$): In addition to the launch complexities using a boat ramp, users must overcome the public perception that ramps are for motorized boats only. The low-cost alternative is to add signage legitimizing its use by canoe and kayaks, so they feel

welcome and can benefit from the nearby loading zones and parking the way other boaters do.

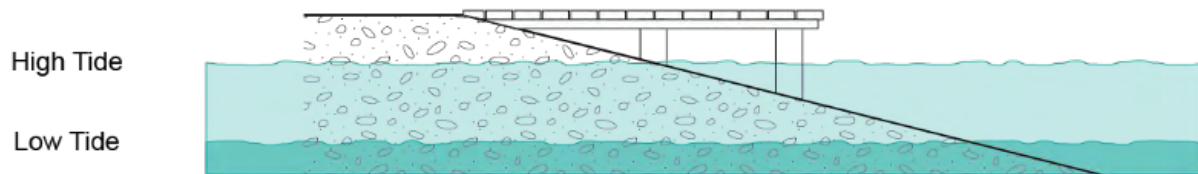


Figure 7. Boat Ramp Alternative 1 (Existing Conditions)

Alternative 2 (\$\$): A modest improvement to launching and minimizing damage to canoe and kayak bottoms is adding rub rails to the ramp. A minimal design down the center would not impede boat trailer use.

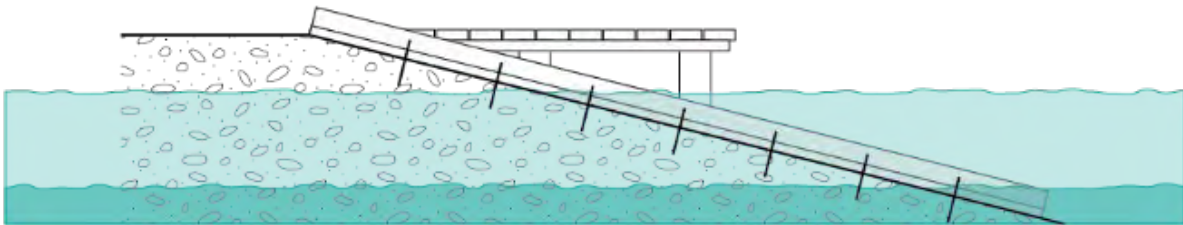


Figure 8. Boat Ramp Alternative 2 (Rub Rails)

Alternative 3 (\$\$\$): The most accessible solution would not involve the boat ramp, but rather an adjacent bulkhead. A gang plank to an ADA (<8%)² floating dock launch could provide access for users of all abilities.

² Section §405 of the ADA ramp requirements for 2021, <https://www.access-board.gov/prowag/>

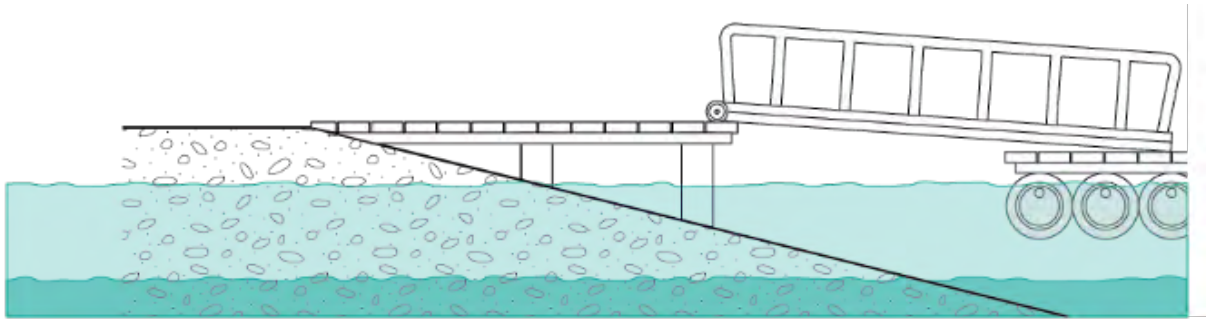


Figure 9. Boat Ramp Alternative 3 (Floating Dock)

BULKHEAD

The Inner Harbor is mostly bulkhead. Large portions have a 10-15'-wide, public promenade that allows waterfront access and recreation.

Alternative 1 (\$): Some locations have ladders. These points could be used to launch a canoe or kayak by more experienced paddlers. Installing cleats could aid in boat tethering.

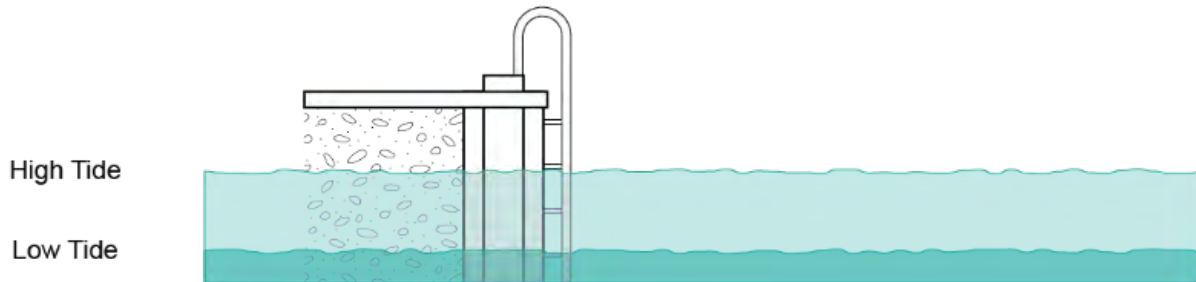


Figure 10. Bulkhead Alternative 1 (Ladder)

Alternative 2 (\$\$): A kayak lift could be purchased and installed along the promenade. This is an intermediate-level way of launching that requires a level of confidence around the water in a public setting.

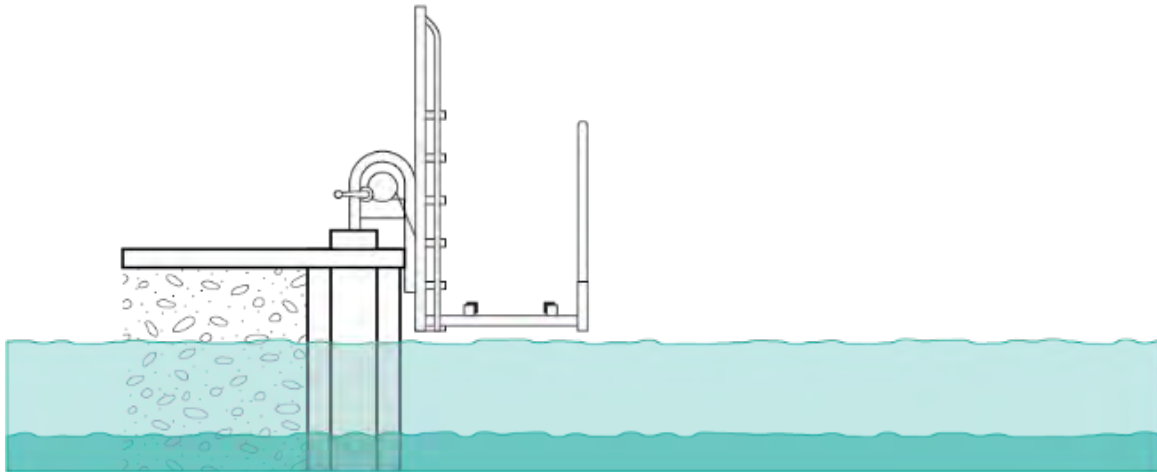


Figure 11. Bulkhead Alternative 3 (Kayak Lift)

Alternative 3 (\$\$\$): The most accessible solution is a gangplank to an ADA floating dock launch that would be suitable for most comfort levels.

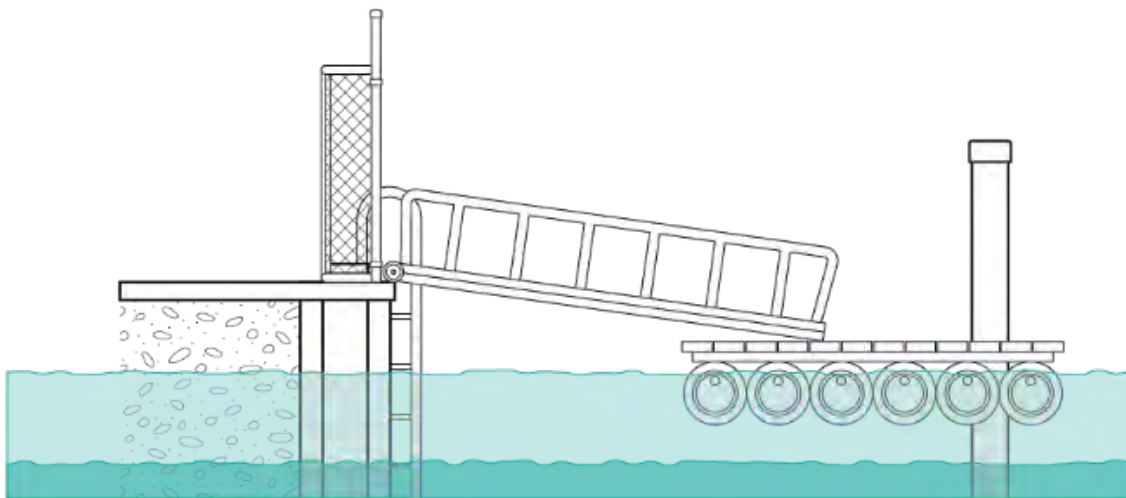


Figure 12. Bulkhead Alternative 3 (Floating Dock)

NATURAL SHORELINE

Much of the Middle Branch of the Patapsco River shoreline is natural material. A gentle slope (<8%) to the water's edge can be conducive for launching a canoe or kayak if there is adequate beach and relatively open, level ground (<5%) for staging.

Alternative 1 (\$): To increase its use, the launch area should be leveled and cleared of unnatural or hazardous debris such as trash or sharp rocks. Depending on the depth,

it can be challenging not to get your feet wet. The site or access will need to be marked to encourage use and improve visibility.

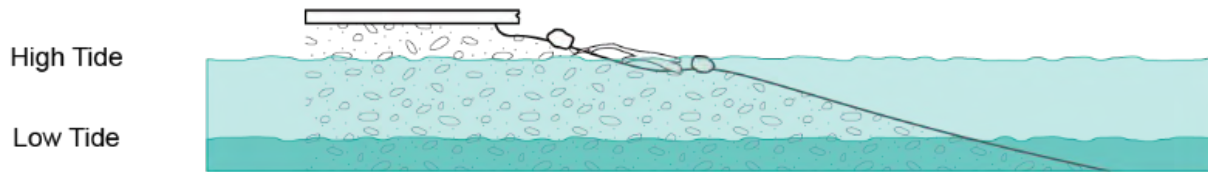


Figure 13. Natural Shoreline Alternative 1 (Existing Conditions)

Alternative 2 (\$\$): An upgrade to the beach launch would be a natural matting and a stabilized substrate. Vegetation can help with stabilization. Railings would assist with pulling out boats.

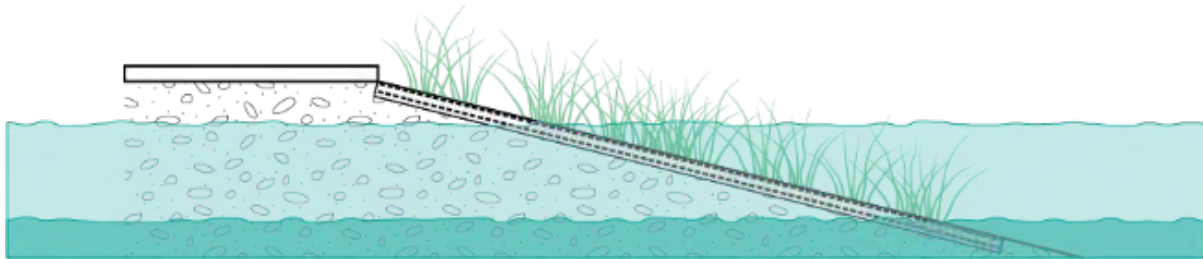


Figure 14. Natural Shoreline Alternative 2 (Natural Matting)

Alternative 3 (\$\$\$): The accessible solution is a permanent ramp with rollers to an ADA floating dock ramp. Helical piles (those that secure into the substrate) will be required.

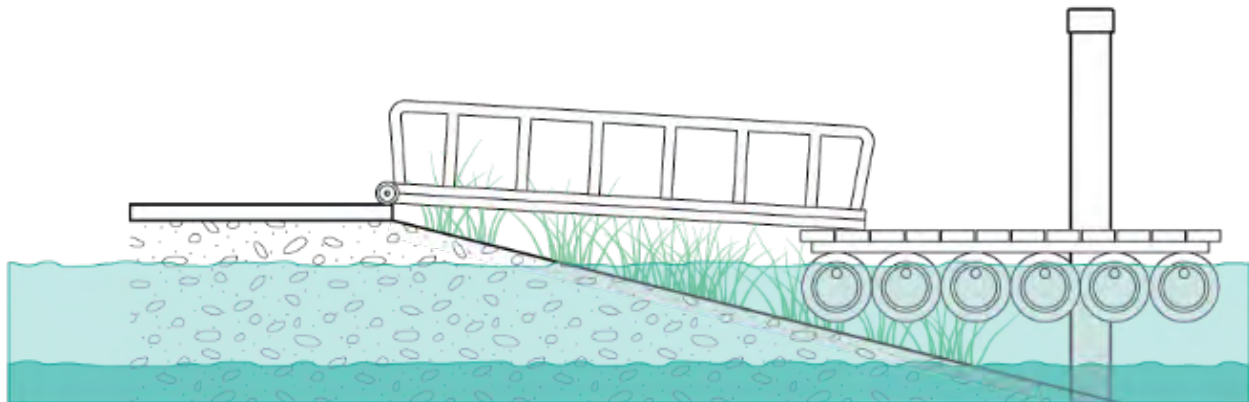


Figure 15. Natural Shoreline Alternative 3 (Floating Dock)

RIPRAP SHORELINE

Some areas of shoreline are stabilized with riprap. The slope tends to exceed 8% in elevation change. Launching from riprap is not possible, because of the sharp, uneven footing.

Alternative 1 (\$): Riprap is an unsuitable launch material. There is no low-cost fix for this shoreline type.

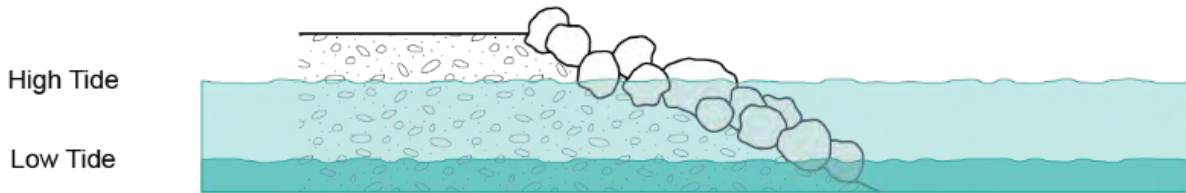


Figure 16. Riprap Shoreline Alternative 1 (Existing Conditions)

Alternative 2 (\$\$): Removing a portion of riprap and replacing it with oversized steps into the water helps paddlers enter the water safely and overcome steep inclines of existing grades.

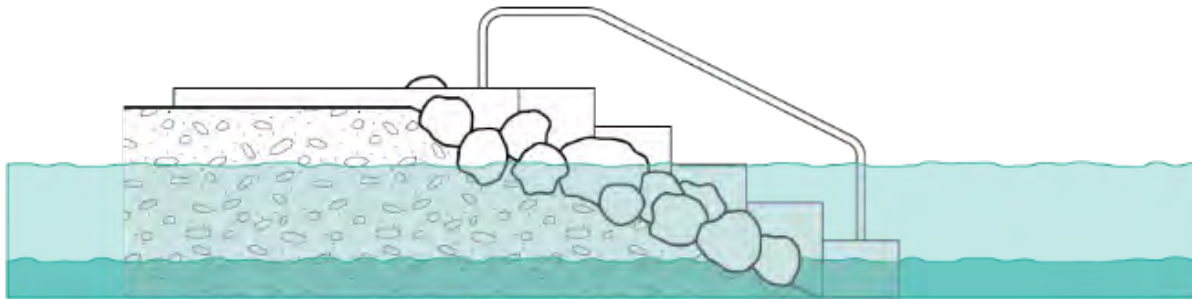


Figure 17. Riprap Shoreline Alternative 2 (Steps)

Alternative 3 (\$\$\$): The accessible solution is a permanent ramp with rollers to an ADA floating dock ramp. Helical piles will be driven to hold the floating dock in position.

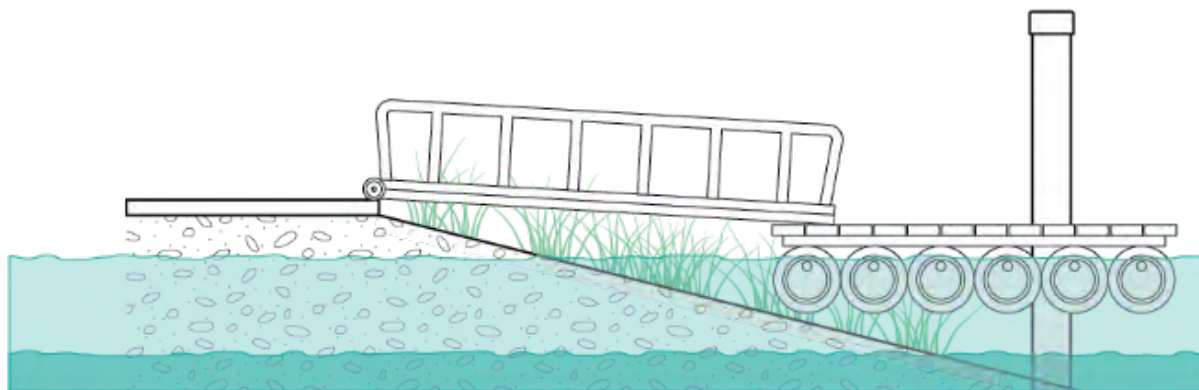


Figure 18. Riprap Shoreline Alternative 3 (Floating Dock)

APPENDICES



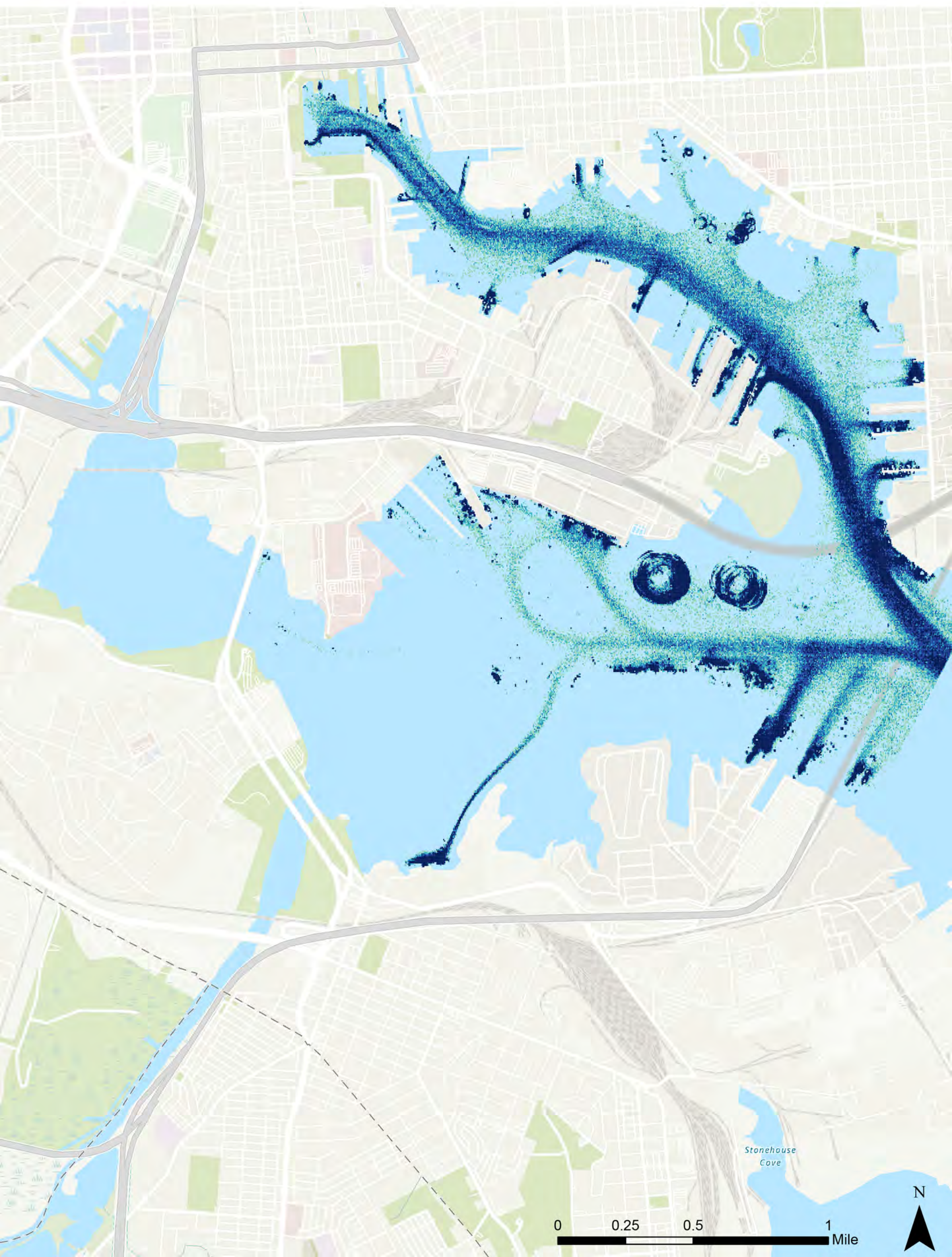
APPENDIX A: BALTIMORE BLUEWAY PROJECT ADVISORY TEAM

ORGANIZATION	REPRESENTATIVE
B'MORE SUP	Jessie Benson
Baltimore City Recreation and Parks	Jamison Holtz
Baltimore City Recreation and Parks	Nicole MacDaniels
Baltimore Community Rowing	Jordan Mueller
Baltimore Community Rowing	Karyn Shackelford
Canton Kayak Club	Ray Scurr
Chesapeake Conservancy	Gabrielle Roffe
Downtown Sailing Center	Stuart Proctor
National Parks Service	Natalia Sanchez
Rails-to-Trails Conservancy	Ethan Abbott
Ultimate Watersports	Hal Ashman
Waterfront Partnership of Baltimore	Adam Lindquist
Waterfront Partnership of Baltimore	Chelsea Anspach
Waterfront Partnership of Baltimore	Leanna Wetmore
Waterfront Partnership of Baltimore	Allison Blood
Waterfront Partnership of Baltimore	Lorenzo Mack-Johnson
Community Member	Valerie Bloom
Community Member	Eddie Chabot
Community Member	Molly Gallant
Community Member	Jared Lyles

MARINE TRAFFIC

Less Traffic

More Traffic



Stonehouse Cove

0 0.25 0.5 1 Mile



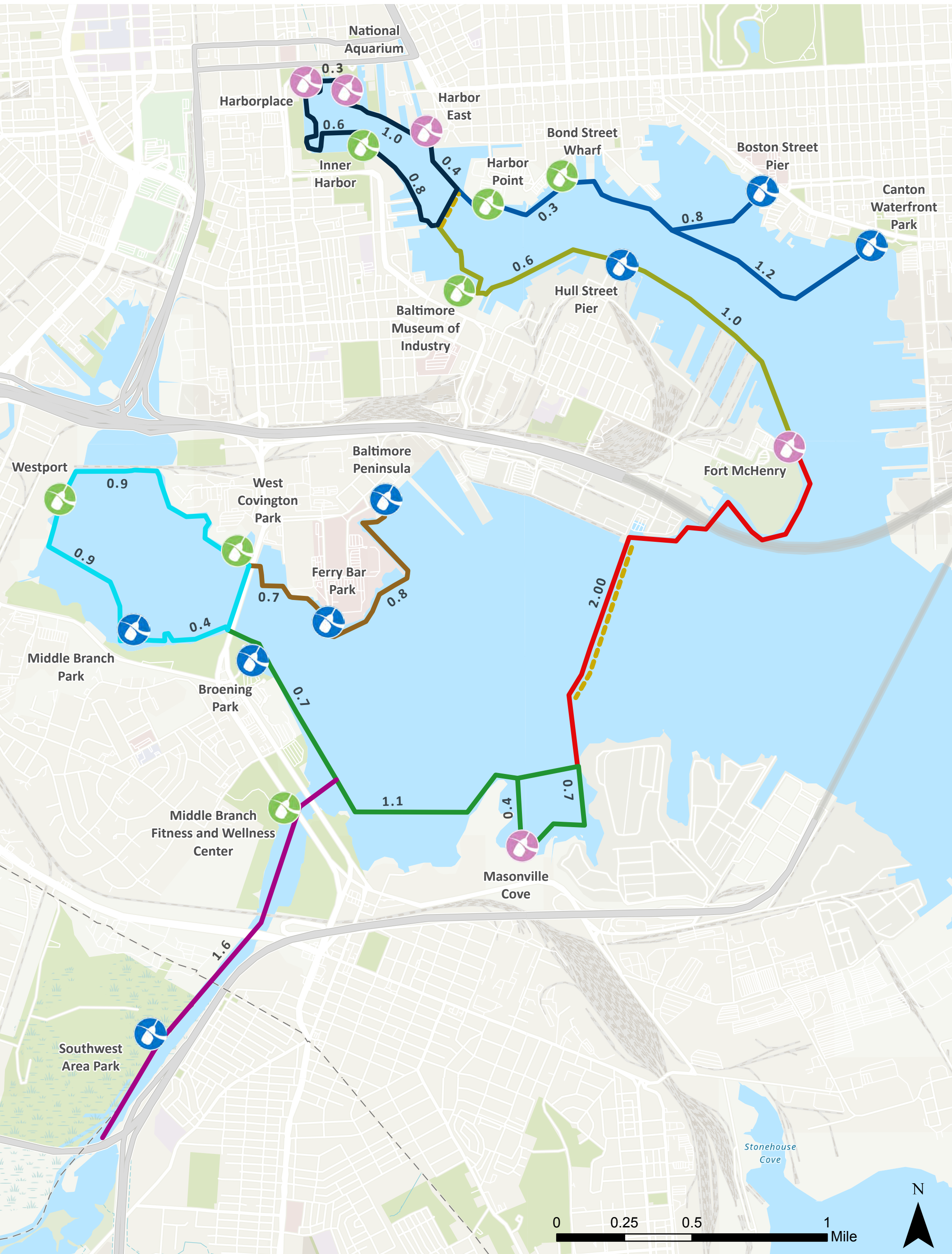


ACCESS POINTS

- Current Access Point
- Proposed Access Point
- Proposed Rest Stop

TRAILS

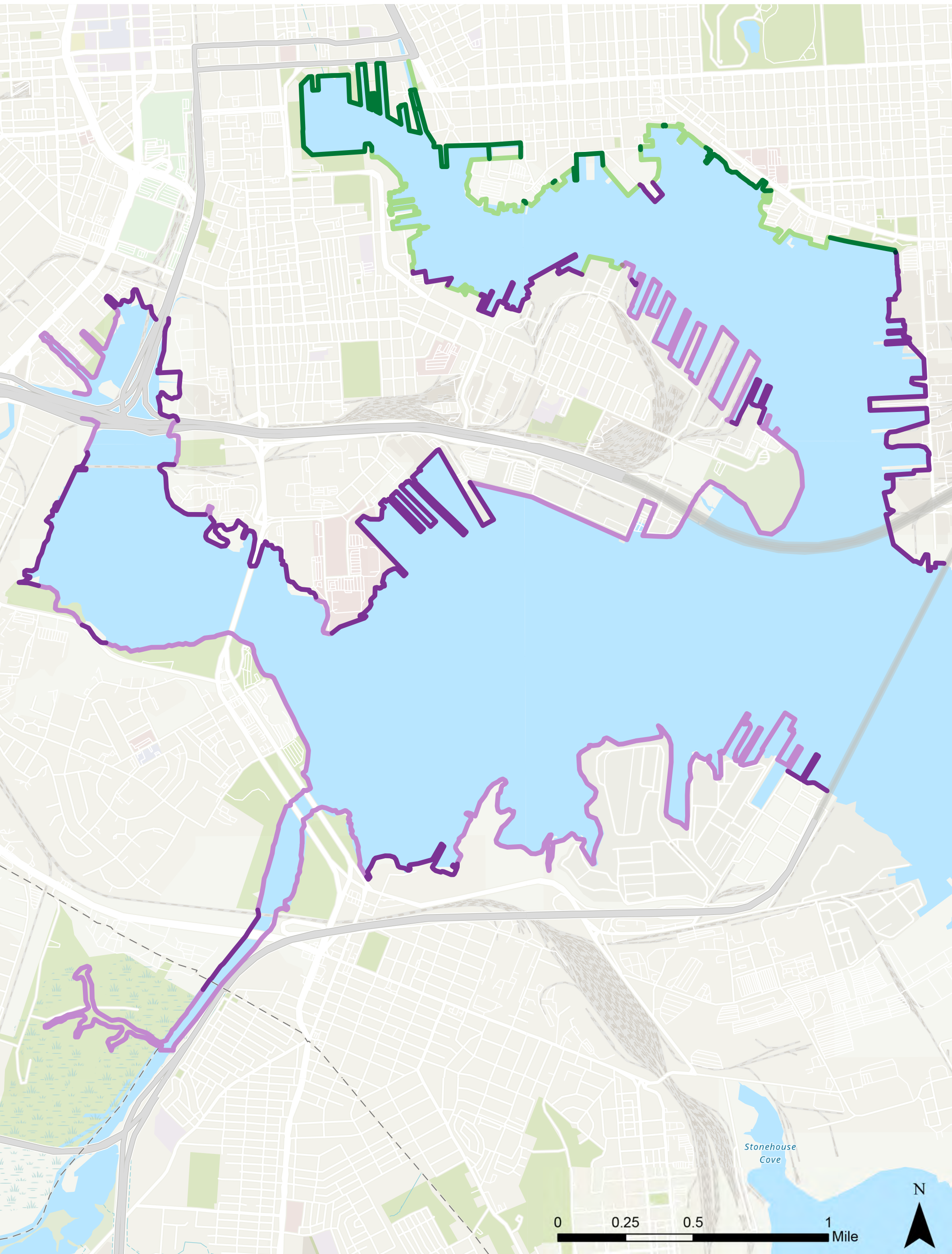
- | BEGINNER | INTERMEDIATE |
|--------------------------------|---|
| Inner Harbor Loop | North Shore Trail |
| Middle Branch Loop | South Shore Trail |
| Non-Tidal Patapsco River Trail | Baltimore Peninsula Trail |
| ADVANCED | Masonville Cove Trail |
| Fort McHenry Crossing | Exercise caution when crossing the shipping channel |





OWNERSHIP / EASEMENT

- Public, with easement
- Private, with easement
- Public, no easement
- Private, no easement





The Stables Building
2081 Clipper Park Road
Baltimore, MD 21211
410.554.0156
www.biohabitats.com

MEMORANDUM

Date: January 5, 2023
To: Adam Lindquist, Waterfront Partnership of Baltimore
From: Biohabitats, Inc.
RE: Baltimore Blueway Master Plan
Subject: Task 1.5: Feasibility Technical Memo

The Biohabitats Team (Biohabitats, Inc. and Toole Design Group) is working with the Waterfront Partnership of Baltimore (Waterfront Partnership) to evaluate approximately 15-miles of the Baltimore waterfront for its potential to become an outdoor recreation and tourism asset for paddlers in the region and the State of Maryland.

For too long, poor water quality, vertical bulkheads, and industry have functioned as both physically and perceived barriers to Baltimore waterfront access. Interacting with the water over the past 50 years has posed a public health risk on many days due to leaking sewers or industrial pollution. As documented in the Harbor Heartbeat, recent water quality trends indicate the Harbor is ready to become Baltimore's new recreational feature and an equitable, expanded, multimodal transportation opportunity in the form of a Blueway.

The purpose of this Feasibility Assessment memo is to document the first phase of the Baltimore Blueway master planning effort. The Phase 1 effort included identifying existing boating resources, documenting existing conditions along the waterfront, and prioritizing opportunities for expanding the network. This was accomplished through data gathering, desktop analysis, field investigation, and initial public and stakeholder engagement. Methods for each of these tasks are reviewed followed by results, additional considerations, and recommendations.

Methods and Summary of Work Completed to Date

Methods and work completed to date are summarized in the following sections and are organized by task: data gathering and desktop analysis; field investigation; and initial public and stakeholder involvement.

Data Gathering & Desktop Analysis

Data gathering for the desktop analysis was completed using a combination of open-source data and stakeholder input. Geospatial data relevant to the project was collected through available open data

portals such as Open Baltimore, MERLIN, NOAA, Baltimore City Parks & Recreation, Maryland iMap, and Open Street Map. These datasets focused on providing a foundational base map for the study area including parcels, hydrology, transportation, parking, trails, hazards, boat ramps, fishing piers, existing kayak/canoe launches, and bathymetry. Additionally, data including water taxi locations and marine vessel traffic over the past two years within the Inner Harbor and Middle Branch were acquired for review and inclusion in the assessment.

A supplemental effort required collecting and organizing spatial data inputs, via ESRI ArcGIS Online input maps, from the Project Advisory Team and the public on existing access locations, property ownership, points of interest, and proposed new access. Once this data was collected, all information was checked for quality assurance and combined into a final water access dataset to be used for desktop analysis and site-specific field assessments. This effort is described in more detail under the write-up, “Project Advisory Team/ Public Survey Map.”

A desktop analysis was completed by leveraging each feature location and determining its spatial relationship to important criteria that would indicate high or low suitability for existing and proposed access points for the future Blueway. Using proximity and overlay tools in ArcGIS, this approach allowed for the determination of distance between existing access, existing amenities, transportation resources, landward trail networks and other criteria. The result of the analysis is a distance parameter depicting the nearest feature of each criterion in relation to the access point. For example: How far away is the closest restaurant? How far away is the closest light rail station? How far away is the closest trail?

A separate spatial analysis method called “Least Cost Path” was utilized to determine the closest distance to existing water access points. This analysis used a starting point (access point of interest) and a destination point (closest existing access location) to determine the shortest path within the Inner Harbor and Middle Branch. This analysis was completed for each existing and proposed access point along with closest distance to public and private access.

Suitability Criteria

The desktop analysis also included the development of a set of suitability criteria to determine the appropriateness and feasibility of various sites around the Baltimore waterfront as existing access, new access, supportive land infrastructure, supportive amenities, and attractions. Data was compiled for the suitability criteria using data from either the desktop or field assessment. The Suitability Criteria is discussed in more detail under “Results.”

Field Assessment Methodology

The Blueway field assessment was conducted via boat over two days. The assessment team consisted of two Biohabitats team members. Within the Inner Harbor zone, the team was joined by a representative from the Waterfront Partnership and a landscape architect from Toole Design. The field assessment portion of the work utilized web maps and a digital survey form to create a custom data collection application which was available to field crews through a mobile device. The mapping portion of the assessment plotted the water access locations collected during data gathering and Project Advisory Team/public input phase of work. This allowed field crews to easily navigate to and evaluate these locations. Certain shoreline locations that were not previously identified as

priority locations were evaluated in the field as potential sites of note, given live observations that elevated potential.

The field survey form was customized to follow an ordered process of questions which aligned with the suitability criteria. The goal was to verify and collect information on existing access, new access, supportive land infrastructure, and supportive amenities. The survey was set up to be adaptable based on user input in order to gather as much pertinent information as possible.

Field data collection included the following fields:

- Launch Name
- Access Type
- Launch Type
- Estimated Water Depth (feet)
- Shoreline Edge Type
- Physical condition of the location
- Kayak and Stand Up Paddleboarding (SUP) access ready
- Access Comments
- Physical Constraints
- American Disabilities Act (ADA) Considerations
- Existing storage space
 - a. Sufficient space to provide storage
- Existing permanent bathroom
 - a. Sufficient space to add permanent bathrooms
- Existing trash cans
 - a. Sufficient space to add permanent trash cans
- Existing picnic area
 - a. Sufficient space to create a picnic area
- Other amenities
- Overall Site Suitability
- Additional Comments
- Photos

Initial Community and Stakeholder Engagement Efforts

Project Advisory Team Meetings

The Waterfront Partnership convened a Project Advisory Team which consists of representatives from the City of Baltimore and local water recreational groups. This includes, but is not limited to, Baltimore City Recreation and Parks, Canton Kayak Club, and Baltimore Community Rowing. The Project Advisory Team was conveyed two times over the course of the first phase. Input was solicited from the Project Advisory Team on the Suitability Criteria, Public Survey (questions and distribution methods), and preliminary desktop and field findings. The Project Advisory Team also

contributed to identifying potential ingress/egress points, attractions, and hazards via a public input map as discussed under “Project Advisory Team/ Public Survey Map.”

A group interview was also held with a smaller group of Project Advisory Team members who volunteered participation to provide more detailed input and recommendations for the Blueway master planning considerations. The results of this interview are summarized below and in **Attachment A**.

Key Stakeholder Interviews

A series of one-on-one/small group interviews were conducted with key stakeholders or experts identified by the Project Advisory Team and Waterfront Partnership as important voices in ensuring a successful Blueway approach for Baltimore. The feedback received during these discussions begins to reveal important considerations for finalizing a Blueway path (loops) and access points as well as supporting the successful future implementation of the Baltimore Blueway. Interviews are identified in the bulleted list below. A detailed summary of the interviews can be found in **Attachment A**.

- **Coast Guard and Dock Master Interview:** The discussion addressed a number of questions regarding safety, potential security risks, impacts and added responsibilities for Coast Guard and dock masters, as well as issues that commonly affect paddlers. Interviewees included: Monica White, (Baltimore City Transit Services Administrator, which encompasses Charm City Circulator, Harbor Connector Water Taxi and the Dock Master’s Program), Ronald Houck (Coast Guard Sector Maryland National Capital Region Waterways Management Division) and Lieutenant Commander Sam Danus (Waterways Management Division Chief).
- **Buffalo Blueway Interview:** Interview was held to learn from an established Blueway with an industrial background similar to Baltimore’s. Interviewee: Jeanne Beiter, Senior Program Manager at the Buffalo Niagara Waterkeeper.
- **Project Advisory Team Member Interview:** The Project Advisory Team was invited to participate in a group interview to promote information exchange and share lessons learned based on experiences with on-water recreation in the Baltimore Blueway project area. Participants included Ray Scurr (President of the Canton Kayak Club) and Karyn Shackelford (Executive Director of Baltimore Community Rowing).
- **Baltimore City Department of Planning and Critical Area Commission Interview:** Questions and discussion centered around land acquisition and public access strategies for developing Blueway access points. Interviewees included: Baltimore City Department of Planning planners and the Critical Area Commission (Bruna Attila, coastal planner and tidal floodplain coordinator for Office of Sustainability, Alex Deweese, City planner for Critical Area Commission, Laurie Feinberg, prior Deputy Director for City Department of Planning, with contributions from Chris Ryer, Director of City Department of Planning and Adam Levine, Chief Solicitor for City Department of Law).

Web-based Public Survey

A 20-question web-based survey (available in both English and Spanish) was distributed by the Waterfront Partnership during the months of May and June 2022. A link to the online survey was

posted on the Waterfront Partnership's social media platforms as well as shared via members of the Project Advisory Team and promoted at various events held along the waterfront.

The survey included twelve questions focused on user experience, desires, and concerns for a future Blueway, followed by eight questions on the demographics of the survey participants. After completing the questions participants were also invited to add points (locations) to an ESRI ArcGIS online interactive input map to indicate areas of interest related to Blueway planning (existing private access, existing public access, proposed new access, supportive amenities, supportive land infrastructure, and hazards). An overview of survey results is provided below with the full results provided in **Attachment B**.

The survey had 450 total respondents, with a significant majority noting that they already paddle in the Baltimore region, and with over half of respondents noting that they paddle in the Inner Harbor or the Middle Branch. Those who responded that they do not paddle noted the following as reasons why they do not paddle in the area:

- Issues with knowing access – where and how; lack of public launch sites
- Lack or costliness of equipment (canoes, kayaks, boards, personal flotation devices)
- Safety concerns (knowing where it is safe to paddle; water quality)
- Do not know how to swim

Close to 100% of the respondents noted that they are interested in a water trail with new and improved access points in the Inner Harbor and Middle Branch.

There are a handful of amenities that the respondents noted they would need along the Blueway many of which correspond to the early response about why paddling is not something individuals or groups do not currently participate in on the Middle Branch or Inner Harbor waterways:

- Put-in/ water Access locations
- Shade/resting areas
- Water quality/pollution alerts
- Parking
- Equipment rentals (kayaks, canoes, SUPs)
- Wayfinding/signage

The response to the need to be able to rent paddling equipment (kayak, canoe, SUP, etc.) was resoundingly affirmative, however, there were concerns raised over the affordability of the proper equipment and the equity issue this raises.

When asked about accessibility needs, 106 out of 450 respondents answered in the affirmative. When asked for specifics, all of the following accessibility needs were identified: visually impaired access, hearing-impaired access, and wheelchair/mobility scooter access. It is clear that universally-accessible put-in locations and amenities should be integrated into the plan to support inclusivity for all members of the community.

[Project Advisory Team/Public Survey Map](#)

The ArcGIS Online input map provided end-users with the ability to collect spatial points of interest within the study area using either a desktop or mobile device. The points of interest were divided into 8 different categories to allow for more focused data collection. These included:

- Existing Private Access
- Existing Public Access
- New Access
- Attraction
- Hazard
- Supportive Amenities (e.g., picnic area)
- Supportive Land Infrastructure (e.g., existing storage)
- Other

An additional line feature type representing potential Blueway routes was made available to participants but did not receive suggestions.

The survey received a total of 73 responses, with 39 from Project Advisory Team members and 31 from public users. The results of this survey were directly incorporated into the access points evaluated using the Suitability Criteria.

RESULTS

The data collected and analyzed from the prior tasks (desktop analysis, field assessment, stakeholder engagement) were utilized to develop suitability criteria to evaluate potential Baltimore Blueway access points (ingress/egress sites). The criteria are listed in **Table 1** along with the general method for obtaining the data (desktop, field, Project Advisory Team/public input). Additional information on the Suitability Criteria can be found in **Attachment C (Data Dictionary)**.

Table 1. Method for Obtaining Access Point Suitability Criteria

Suitability Criteria	Method for Obtaining
Access Feasibility	
Access Type	Project Advisory Team/Public Input
Ownership	Desktop
Promenade Easement Status	Desktop
Physical Condition	Field
Overall Site Suitability Characterization	Field
Closest Distance to Existing Public Access	Desktop
Closest Distance to Private Access	Desktop
Equity Index (Social Vulnerability Index)	Desktop
Launch Type	Field
Estimated Water Depth (ft)	Field
Shoreline Edge Type	Field
Kayak/ Stand Up Paddle Access	Field
ADA Considerations	Field
Physical Constraints	Field
Supportive Infrastructure	
Existing Parking Lots/Street Parking	Field
Proximity to Public Transportation, Bus/Light Rail	Desktop
Water Taxi Stop	Desktop
Trail and Bike Lane Proximity	Desktop
Supportive Amenities	
Restaurant Proximity	Desktop
Existing Storage Space	Field
Existing Bathroom/ Available Space	Field
Existing Trash Can/ Available Space	Field
Existing Picnic Area/ Available Space	Field
Other Amenities	Field

The Suitability Criteria was utilized to categorize potential access points into either:

- Key Access Points
- High Priority
- Medium Priority
- Low Priority
- Rest Stop

Equity was included in the suitability criteria by identifying the Social Vulnerability Index (SVI) classification associated with each potential access site (see **Attachment D**). However, equity was not directly factored into the prioritization of sites as there are several communities located throughout Baltimore City that are classified as highly vulnerable. Associating a specific, potential access point with an SVI classification does not adequately reflect the spatial distribution or needs of waterfront access from an equitable standpoint. Instead, the prioritization focused on identifying gaps within the Blueway network and potential access points that would fill those gaps (reduce distance between access points) in order to provide access throughout the Blueway project area.

Sites have the potential to meet the criteria for multiple priorities. In cases where the site met the criteria for more than one prioritization (i.e., Key Access Point, High Priority, and/or Medium Priority), the highest available prioritization was assigned to the site. Sites that met the prioritization criteria and Rest Stop criteria were first assigned the prioritization designation (e.g., High Prioritization) and annotated as also qualifying for Rest Stop in Table 2.

These categories and associated criteria are described in further detail below.

Key Access Points: access/launch sites that are existing access points that can currently support paddler access (i.e., access sites that are ready to go today). Sites categorized as Key Access Points met the following criteria:

- Type: Existing
- Ownership: Public or Complete Promenade Easement (Public or Private)
- Existing Parking Lot: Yes
- Water Taxi: No or Space to Avoid Conflicts
- Physical Condition: Good
- Overall Site Suitability Characterization: High

High Priority: These sites should be prioritized for establishing an access point along the Baltimore Blueway. Sites categorized as High Priority access points met the following criteria:

- Ownership: Public or Complete Promenade Easement (Public or Private)
- Distance to Existing Access: ≥ 0.4 miles
- Water Taxi: No or Space to Avoid Conflict
- Overall Site Suitability Characterization: Medium or High

Medium Priority: These sites show promise as a future access point but may require some work to establish. These sites are elevated above low priority sites due to proximity to transit and/or because the potential site could help to create a more complete, accessible water trail network by filling a gap between existing access sites. Sites categorized as Medium Priority access points met the following criteria:

- Near Transit: ≤ 0.2 miles **OR**
- Distance to Existing Access: ≥ 0.4 miles
- Water Taxi: No or Space to Avoid Conflict

Rest Stop: These are areas where paddlers may stop along the way to enjoy site amenities such as a picnic area or restaurant. Proximity to transit and parking were not taken into account as it was assumed that paddlers would anchor their personal watercraft at the access point. Personal watercraft security will need to be addressed to facilitate use of these areas. Sites categorized as a Rest Stop met the following criteria:

- Amenities: Existing Picnic Site or Restaurant (within 0.1mi)
- Physical Condition: Good
- Overall Site Suitability Characterization: Medium or High

Low Priority: includes the remainder of the sites not captured by one of the prior categories.

These sites, along with their suitability categorization are displayed in **Figures 1 and 2** and summarized in **Table 2**. Attractions, as identified by the Project Advisory Team/ Public Input map and Biohabitats team, are also shown in **Figures 1 and 2**. Detailed results can be found in **Attachment D**.

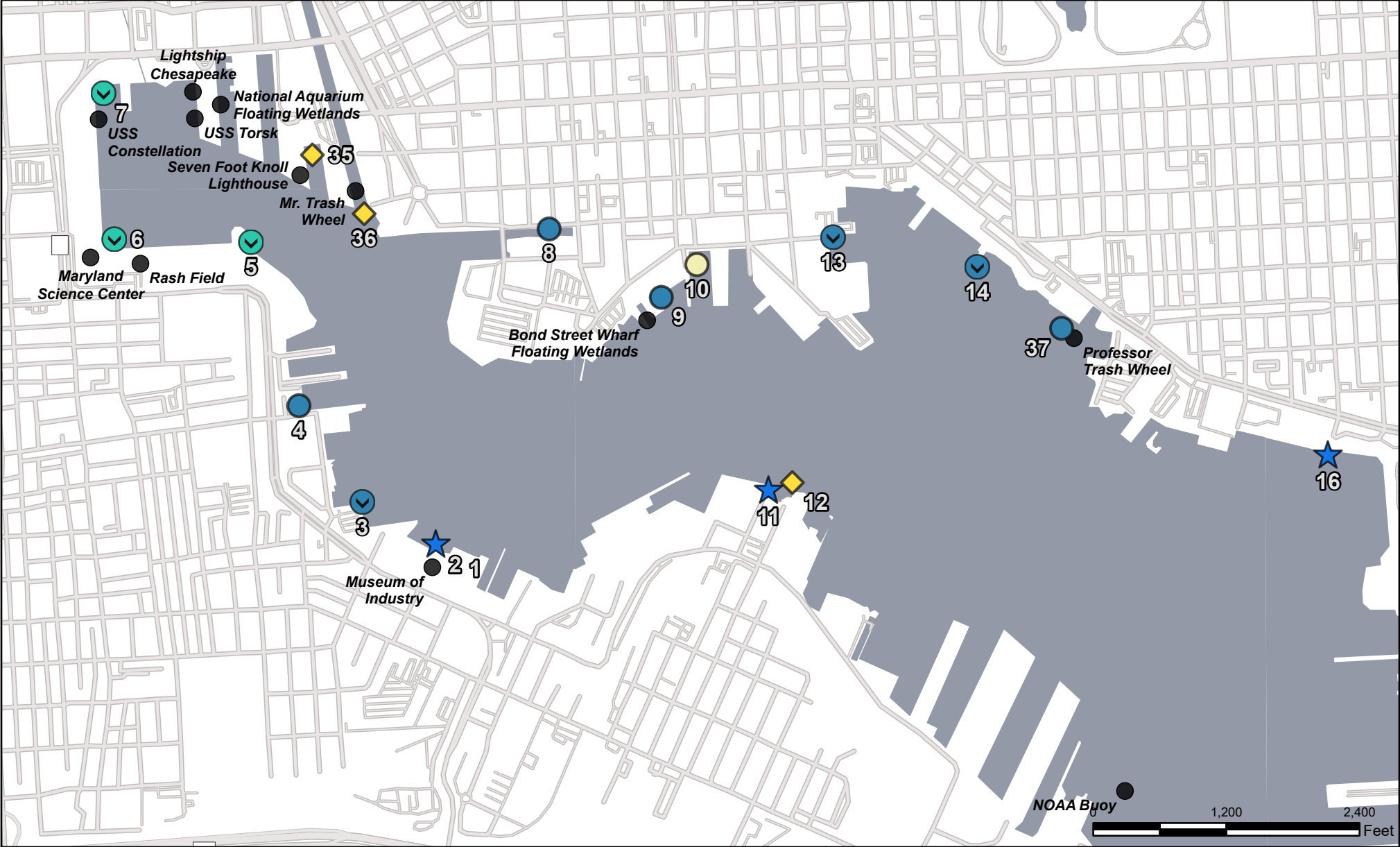
Table 2. Access Point Suitability Categorization Results¹

Site ID	Launch Name
Key Access Points	
2	Baltimore Museum of Industry ²
11	Tide Point, Locust Point Site 1 ²
16	Canton Waterfront Park ²
19	Ferry Bar Park ²
24	Baltimore Rowing Club at Middle Branch Park ²
30	Southwest Area Park ²
31	Broening Park ²
High Priority	
1	Downtown Sailing Center
3	Harbor View ²
4	Harbor View Condo (Example for Entire Promenade)
8	Living Classrooms/Lancaster Canal
9	Fells Point – Bond Street Warf
13	Thames Street ²
14	Canton ²
22	West Covington Park ²
37	Professor Trashwheel
Medium Priority	
5	Rusty Scupper Water Taxi ²
6	Science Center ²
7	Harbor Place ²
17	Fort McHenry ²
18	Sagamore Distillery
27	Masonville Cove ²
28	Patapsco Mouth ²
29	Patapsco Northside ²
Rest Stop	
12	Water Taxi Access (Tide Point, Locust Point, Site 2)
20	Nick’s Fish House
35	Pier 5
36	Harbor East Water Taxi Stop
Low Priority	
10	Harbor Point
25	Swann Park
26	Ridgely’s Cove
32	Westport

1: Sites categorized as High Priority, Medium Priority, Low Priority, and Rest Stop may require physical improvements to accommodate paddler access

2: Also meets criteria for Rest Stop

Baltimore Blueway Master Plan

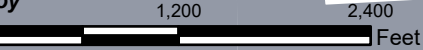


Site Classification

- ★ Key Access Point and/or Rest Stop
- High Priority
- High Priority and/or Rest Stop

- Medium Priority
- Medium Priority and/or Rest Stop
- Low Priority

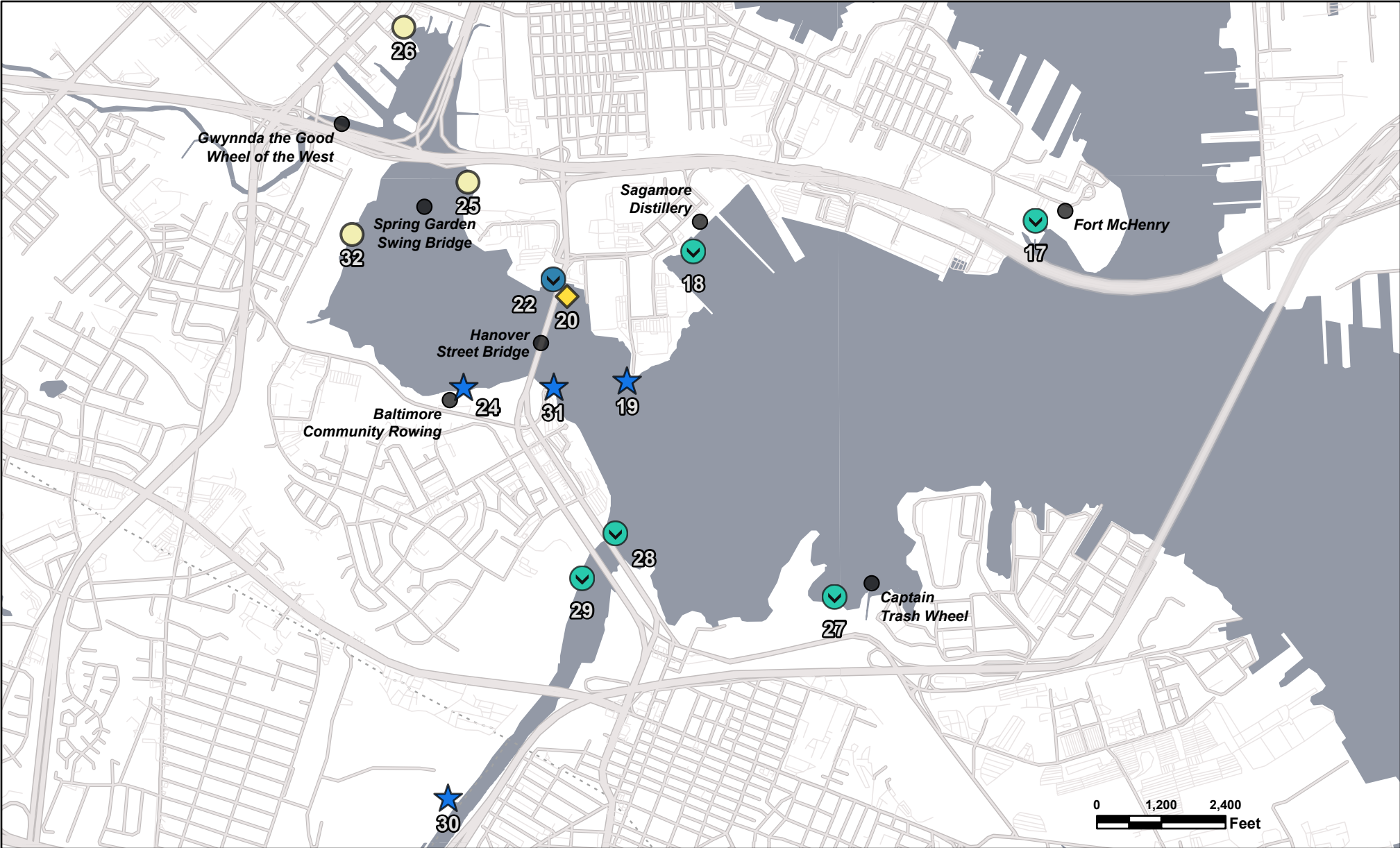
- ◆ Potential Rest Stop
- Attractions
- Hazards



WATERFRONT PARTNERSHIP
OF BALTIMORE

TOOLE DESIGN Biohabitats

Baltimore Blueway Master Plan



- ★ Key Access Point and/or Rest Stop
- High Priority
- Ⓢ High Priority and/or Rest Stop
- Medium Priority
- Ⓢ Medium Priority and/or Rest Stop
- Low Priority
- ◆ Potential Rest Stop
- Attractions
- Hazards



ADDITIONAL CONSIDERATIONS

Establishing the Baltimore Blueway requires considerations beyond the physical characteristics of potential access points. This includes environmental permitting considerations and acquisition strategies to gain access to areas where extending or utilizing an existing promenade easement is not an option. These are described in further detail below.

General Acquisition Strategies and Development Regulation

There are many ways to secure and develop right-of-way for greenway/blueway systems. It will be necessary to work with landowners to secure trail right-of-way when it does not exist. The following section details a list of specific strategies and policies drawn from programs in Portland, OR, Aberdeen, NC, Prince Georges County, MD and non-profit sources including Rails-to-Trails Conservancy (RTC). The information provided includes partnerships and various acquisition options to consider in developing access points to the Baltimore Blueway and its connecting corridors.

Partnerships: The Waterfront Partnership, City, and supporting organizations should pursue partnerships with land trusts and land managers to make more effective use of their land acquisition funds and strategies.

- *Land Trusts.* Land trust organizations are valuable partners when it comes to acquiring land and rights-of-way for greenways. This could be useful for establishing park-like waterfront access areas, managed by a single-entity or partnership. These groups can work directly with landowners and conduct their business in private so that sensitive land transactions are handled in an appropriate manner and will often transfer land to the public agency once encumbered.

The Waterfront Partnership and the City of Baltimore should actively maintain relationships with private utility and land managers to ensure that the community wide greenway/blueway system can be accommodated within these access areas and/or rights-of-way. The City will need to demonstrate to these companies that maintenance will be addressed, liability will be reduced and minimized and access to property needs will be provided.

Acquisition strategies: As indicated in RTC's, Successful Strategies for Trail Development, acquiring a right-of-way for a greenway/blueway access point is rarely a simple, straightforward task. The process often requires multiple stages of groundwork, including conducting property/corridor research to determine who owns the right-of-way, undertaking environmental assessments, negotiating with the landowner, figuring the cost, or value, of the property and securing financing or funding. The following list of tools describe various methods of acquisition that the City can use to acquire greenway lands.

Purchase. Land can be purchased outright by either a nonprofit or a public entity. This option may be the simplest, but it can prove costly, especially if it requires reaching agreements with multiple landowners.

Option to Buy. An option is a legal document giving a person the right to buy. The document outlines the required price and applicable period, with a fee (often 10 percent of land value).

If the property is bought, the fee is deducted from the purchase price; if the purchase does not proceed, the fee is nonrefundable.

Easements. An easement is a right to use another person's real estate for a specific purpose; in the City's case, a trail. Easements can be negotiated with railroads, private landowners and public entities, such as a utility company. Because you are not purchasing the land, the cost is typically less than if you were to purchase it.

Land Donations. A landowner can donate property to an agency or organization. Tax credits may be available for land donated for conservation purposes.

Land Lease. In these cases, the land is rented from the landowner for a set amount of time. Leases can come from a variety of sources, including utility companies, railroads and public entities.

Purchase and Lease Back. An agency can purchase property and lease it to the previous owner for a specified period of time. This arrangement may include use restrictions and may be useful if the landowner wants to sell the land but wishes to continue using it, such as for grazing animals.

Bargain Sale. This refers to the sale of a property at less than the fair market value. The difference between a bargain sale price and fair market value often qualifies as a tax-deductible charitable contribution. You can use this method to avoid high capital gains taxes.

Eminent Domain. Property, or parts of property, can be forcibly taken from a landowner for use by the general public. This method is not ideal because it can create resentment toward the trail by the former landowners and lead to negative press coverage, and the acquirer is still required to pay fair market value for the property.

Purchase of Development Rights. This involves purchasing the development rights from a private property owner at a fair market value. The landowner retains all ownership rights under current use but exchanges the rights to develop the property for cash payment.

Land Banking. This involves land acquisition in advance of expanding urbanization. The price of an open space parcel prior to development pressures is more affordable to a jurisdiction seeking to preserve open space. A municipality or county might use this technique to develop a greenbelt or preserve key open space.

Government regulation. The City can control the use and development of land through legislative powers. Regulatory methods help shape the use of land without transferring or selling the land. The following types of development ordinances are regulatory tools that can meet the challenges of suburban growth as well as conserve and protect greenway resources.

- Growth management measures
- Performance zoning
- Incentive zoning
- Conservation zoning

- Overlay zoning
- Negotiated dedications
- Reservation of land
- Planned unit development
- Cluster development

Preliminary Environmental Permitting Considerations

The Baltimore Blueway Master Plan will identify pathways and water access points. To make the Blueway a reality, future phases will require the design, permitting, and installation of boat launches and amenities at selected water access points. Permitting requirements will vary at water access points depending on the extent of the proposed designs. The following is a list of potential permits or reviews that may be required for access point upgrades, installation and construction.

- Tidal Wetland Permit
 - Joint Permit Application will address impacts associated with installation of ramps, piers and other infrastructure that disturbs or covers tidal waters.
 - Agencies – Maryland Department of Environment (MDE) and United States Army Corps of Engineers (COE)
- Expedited Pier License
 - For PRIVATE fixed piers and associated structures such as platforms, boat hoist or lifts, mooring piles, and osprey poles.
 - Agency – MDE
- Critical Area Buffer Management
 - Only applicable if proposed access point design results in more than 5000 square feet of disturbance on the land within the critical area buffer
 - Agency – Baltimore City Department of Planning
- Building Permit
 - Agency – Department of Housing and Community Development
- Erosion and Sediment Control
 - Only applicable if proposed access point design results in more than 5000 square feet of disturbance on the land
 - Agency – Department of Public Works
- Stormwater Management
 - Only applicable if proposed access point design increases impervious cover
 - Agency – Department of Public Works
- Baltimore City Historic Preservation Guidelines
 - Applicability is considered unlikely given expected scale and proposed interventions.
 - Agency - Commission for Historical and Architectural Preservation (CHAP)

NEXT STEPS

In Task 2, a draft and then final trail plan will be developed based on Project Advisory Team and community feedback, as well as a more in-depth look at ownership and implementation considerations. Besides access, the team will delve deeper into the types of access and potential design approaches. The public participation components that occur in Task 2 will provide feedback to refine a draft vision, principles, and goals for the Blueway. Up to three design typologies will be developed as a menu for the possible types of access points possible for the Blueway, as well as draft and final alignment of trail segments. A map and logo will be developed as well as part of working towards branding for the Baltimore Blueway.

Beyond Task 2, discussions with the Project Advisory Team and the key interviews have identified efforts that will contribute to the success of a Baltimore Blueway. These include:

- Continue work to improve the Baltimore waterways' dirty water image. This includes
 - Interpretative signage with history of cleaning up the water.
 - BlueWater Baltimore QR codes links to daily water quality reports.
 - Increasing opportunities for positive encounters to occur such as water quality education programming in publicly accessible waterfront parks.
- Establish and implement a communications strategy for paddlers/public. This should include a Baltimore Blueway-specific website, mapping, and signage.
- Create a conditions rating system to let paddlers know when conditions are safe (i.e., red, yellow, green based on temperature, weather, and/or water quality).
- Identify and move forward with one new access point to celebrate/kickoff the establishment of the Baltimore Blueway.
- Work with partners to establish programming that provides regularly scheduled safety training and guided kayak tours for beginners (and other interested parties).

ATTACHMENTS

A: Summary of Key Stakeholder Interviews

B: Public Survey Summary

C: Access Point Suitability Criteria Data Dictionary

D: Access Point Suitability Criteria Table

ATTACHMENT A: KEY STAKEHOLDER INTERVIEW SUMMARIES

Coast Guard and Dock Master Interview

An interview was conducted by Biohabitats with the following interviewees: **Monica White**, (*Baltimore City Transit Services Administrator, which encompasses Charm City Circulator, Harbor Connector Water Taxi and the Dock Master's Program*), **Ronald Houck** (*Coast Guard Sector Maryland National Capital Region Waterways Management Division*) and **Lieutenant Commander Sam Danus** (*Waterways Management Division Chief*). The discussion addressed a number of questions regarding, safety, potential security risks, impacts and added responsibilities for Coast Guard and dock masters as well as issues that commonly affect paddlers. The main concerns from all parties included the following:

- Traffic Interference
 - Other recreational motorized watercraft (paddlers are slower than motorized vehicles and could cause slowdowns or accidents in the water if not vigilant)
 - Large vessels (paddlers could block large vessel routes)
 - Harbor Connector Water Taxi (adding paddlers could affect the travel routes for water taxis and interfere with taxi stops if launches are too close)
- Liability
 - Safety Plan needed
 - Designated Blueway contact needed for issues such as:
 - Slip and falls
 - Repairs
 - Signage
 - Docks/launches
 - Need for the dissemination of information about water craft advisories, seasonal/time of day related trail/launch closures, and visibility issues
- Safety/Accessibility
 - ADA Compliance
 - Life jacket supply/availability
 - Access for children and those with special needs
 - Lack of radio/communication with paddlers

Buffalo Blueway Interview

Jeanne Beiter, *Senior Program Manager at the Buffalo Niagara Waterkeeper*, was interviewed for the Baltimore Blueway Project due to her involvement in the creation of the successful Blueway in Buffalo, New York. During this interview a series of questions were posed by Biohabitats as well as **Adam Lindquist**, *Vice President of Programs at the Waterfront Partnership of Baltimore and Project Manager for the Baltimore Blueway Project*.

The Buffalo Blueway started in 2018 as a project to improve the Buffalo River, which during its long industrial past had experienced significant pollution. Community members have long been disconnected from the waterfront with limited access to the water. Thirty years ago, the Buffalo River was also listed, as an EPA Area of Concern (AOC), which Jeanne mentioned has become a priority for several organizations throughout Buffalo, including the Buffalo Niagara Waterkeeper, as

the lead organization. The goal is to have the river delisted by 2025 due in part to Blueway efforts. With the help of a \$10 million grant investment from Buffalo Billion in 2018, several access/launch sites have been established along the river. Jeanne and her team are striving for ADA accessibility as well, but all sites are not eligible due to river and shoreline limitations. Two sites are currently accessible.

Access point installation is projected to cost between \$500,000 to \$1.3 million and can involve grading, debris deflectors, tree removal, replanting, and the use of high-quality materials, i.e., wood planks that are not flammable. Special branding along the Blueway includes paddles with the Blueway logo along the water's edge, acting as an indicator of Blueway sites, and interpretive signs that say "You Are Here" and describe what is upstream downstream of each site. There is currently no programming associated with the Blueway, but they have had kayak tours in the past and their website is designed so people can plan out their trip. Blog posts, live-streaming and social media campaigns have also boosted public knowledge about the four completed Blueway access points.

Jeanne stressed the importance of building good partnerships with stakeholders and finding out how the community already uses existing spaces before designing features (ex. enhancing seating, trail pathways, fishing piers near launches). MOU agreements were created to manage roles and responsibilities of all parties including long term maintenance, repairs and replacement of docks, seasonal dock removal and on-site storage for kayaks and canoes.

Her final advice for a new Blueway in an area like Baltimore, with a long history of industry along the waterways, is to embrace the history and identity around Baltimore's industrial past and include that in signage, websites, and as a part of the future trail. She suggested the team find out what resonates with people and expand on it.

Project Advisory Team Member Interview: Canton Kayak Club and Baltimore Community Rowing

The Project Advisory Team was invited to participate in a group interview in order to promote information exchange and share lessons learned based on experiences with on water recreation in the Baltimore Blueway project area. Participants included **Ray Scurr** (*President of the Canton Kayak Club*) and **Karyn Shackelford** (*Executive Director of Baltimore Community Rowing*). Significant findings from the interview include:

- \$30 – 40K/year is required to maintain Canton Kayak Club docks
- Insurance is required for nine of Canton Kayak Club location regardless of partners (restaurants, businesses, City of Baltimore)
- Safety considerations are paramount and should include:
 - Establishing a system to let kayakers know when conditions are safe (i.e., red, yellow, green based on temperature, weather, and/or water quality)
 - Setting temperature minimums or a seasonality for paddling
 - Orientation or training to review traffic and safety basics
- Baltimore Blueway should consider including designated points for beginners where conditions tend to be calm and traffic low

Baltimore City Department of Planning and Critical Area Commission Interview

An interview was conducted with existing and prior **Baltimore City Department of Planning** planners and the **Critical Area Commission** (*Bruna Attila, coastal planner and tidal floodplain coordinator for Office of Sustainability, Alex Dewese, city planner for Critical Area Commission, Laurie Feinberg, prior Deputy Director for City Department of Planning, with contributions from Chris Ryer, Director of City Department of Planning and Adam Levine, Chief Solicitor for City Department of Law*). Questions and discussion centered around land acquisition and public access strategies for developing Blueway access points.

The participants agreed access points should be within proximity to existing connectivity routes/trails, prioritize placement within historically underserved populations, and provide free boats as part of the program. For creating new or modifying existing water access points on existing City-owned public land, it was recommended to identify the underlying agency jurisdiction, (i.e., Recreation and Parks, DOT, or DHCD). This will be the agency that will accept the improvements. If the access point is on private land with a public access easement along the promenade, the entity to negotiate with will be in the Promenade Easement Document available through the Planning Department website. If the site is on state or federal land, there will be an underlying agency or department of control such as the Maryland Port Administration or the National Parks Service. Consider framing the access request within the public service and level of disadvantaged population it will serve for a positive response. To accomplish well-rounded public support, inform the City Councilmember what improvements are being proposed to serve their district. Private land strategies can be found in Site Establishment Considerations section.

Opportunities for increasing access point strategies success:

- Legal authority for Promenade Easement Documents must be established in (or extended to) the Middle Branch. W-2 Overlay Subdistrict Zoning is a new classification to establish public access easements for a hiking and biking trail within the 100' critical area buffer along the Middle Branch of the Patapsco. No easements in the Middle Branch have been codified to-date.
- The state and federal government have control over the public water, but the city has jurisdiction over the use of the harbor. A concerted effort to re-establish the role of Harbor Master could serve the goals of the Baltimore Blueway.



Attachment B: Public Survey Summary of Results

Biohabitats, Inc.

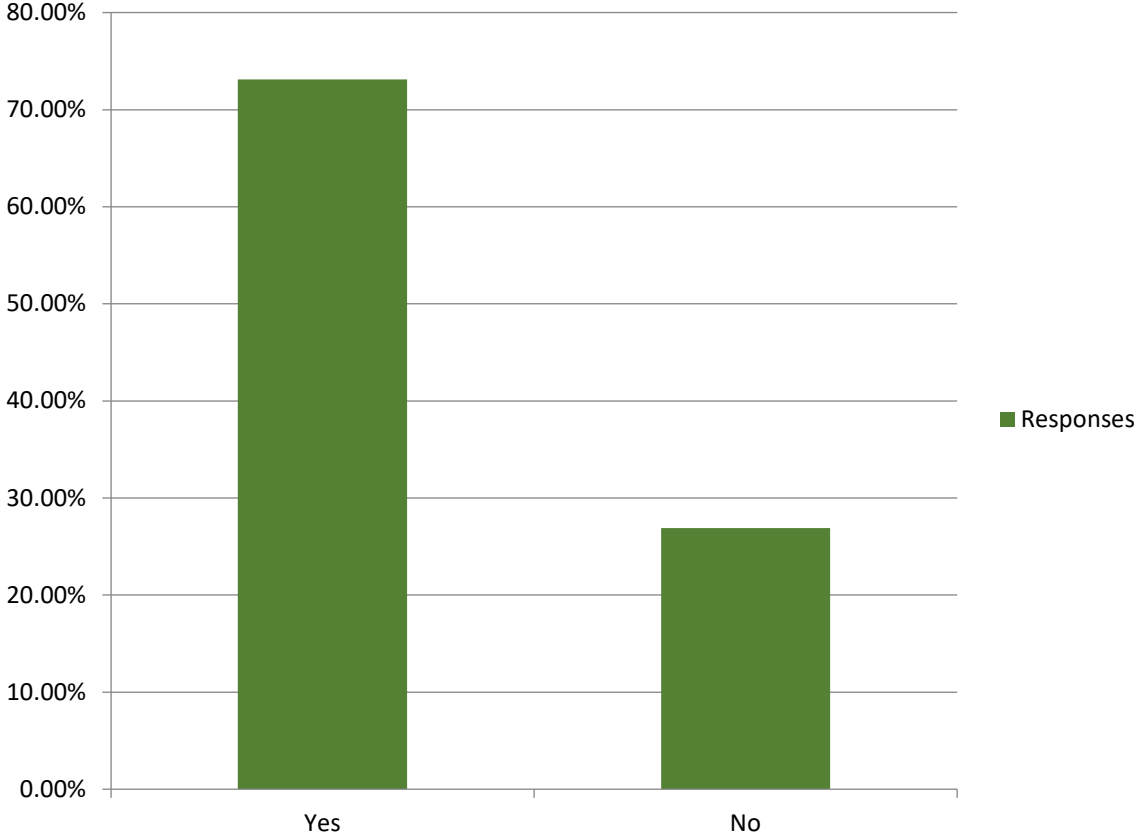
July 2022

Q1 - Do you currently paddle (canoe/kayak/SUP/other) in the Baltimore region?

329 out of 450 respondents said YES.

Those who said NO, provided a variety of responses as to why, including:

- Issues with access – where and how, lack of public launch sites
- Lack of equipment
- Safety concerns
- Lack of knowledge of where its safe to row (routes)
- Concern water quality, public health issues
- Concern about trash
- Concerns about ship traffic & motorized boats
- Concerns about personal safety and security in loading, unloading and parking

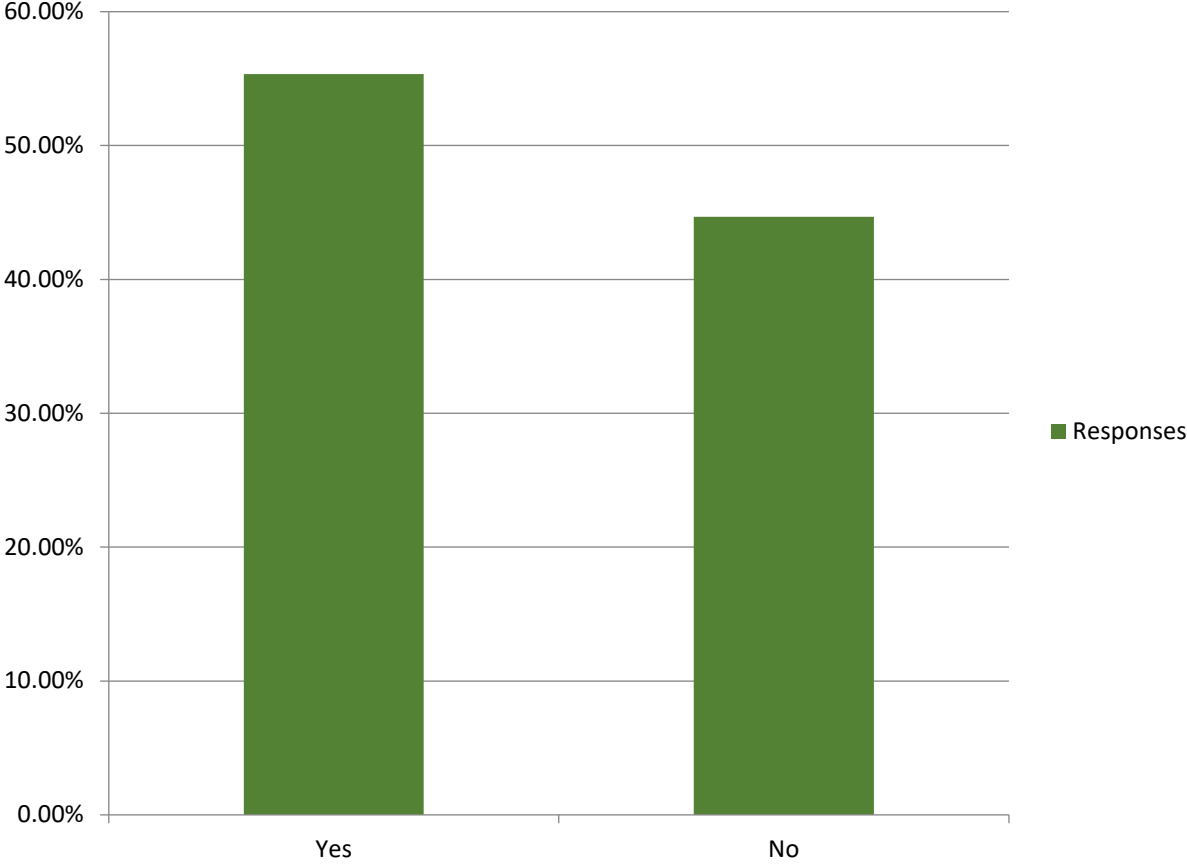


Q2 - Do you currently paddle (canoe/ kayak/SUP/other) in the Inner Harbor or the Middle Branch?

249 out of 450 respondents said YES.

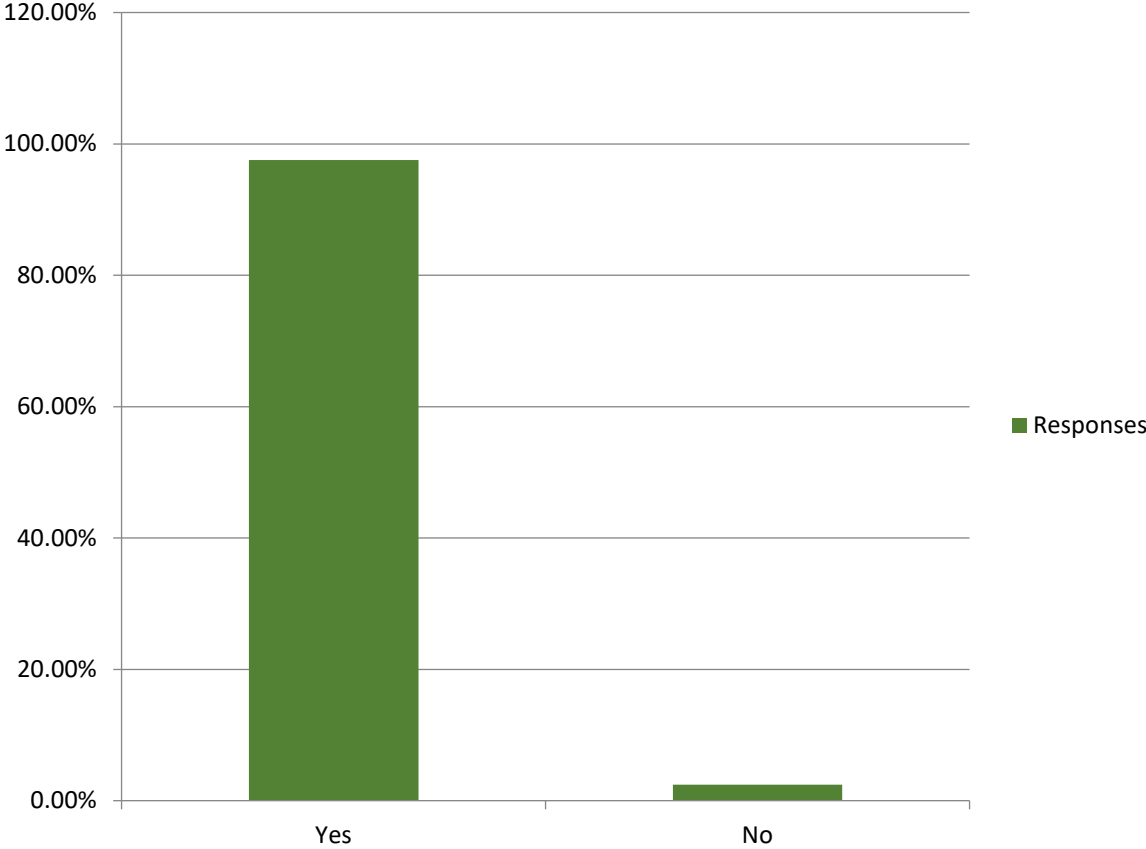
Those who said NO, provided a variety of responses as to why, including:

- Issues with access – where and how, lack of public launch sites
- Lack of equipment
- Safety concerns
- Lack of knowledge of where its safe to row (routes)
- Concern water quality and CSO's, public health issues
- Concern about trash
- Concerns about ship traffic & motorized boats
- Concerns about personal safety and security in loading, unloading and parking
- Lack of lights for night rowing
- Don't know how to swim



Q3 - Are you interested in a new water trail with new and improved access points in the Inner Harbor/Middle Branch?

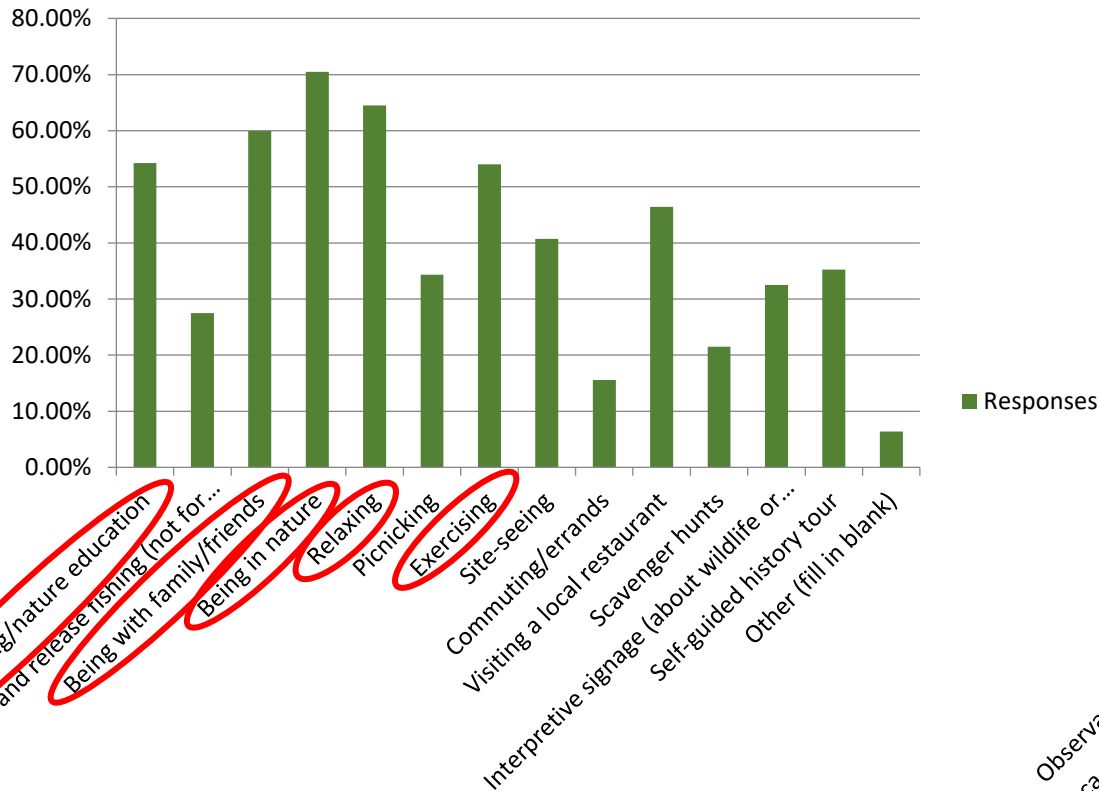
OVERWHELMINGLY POSITIVE !



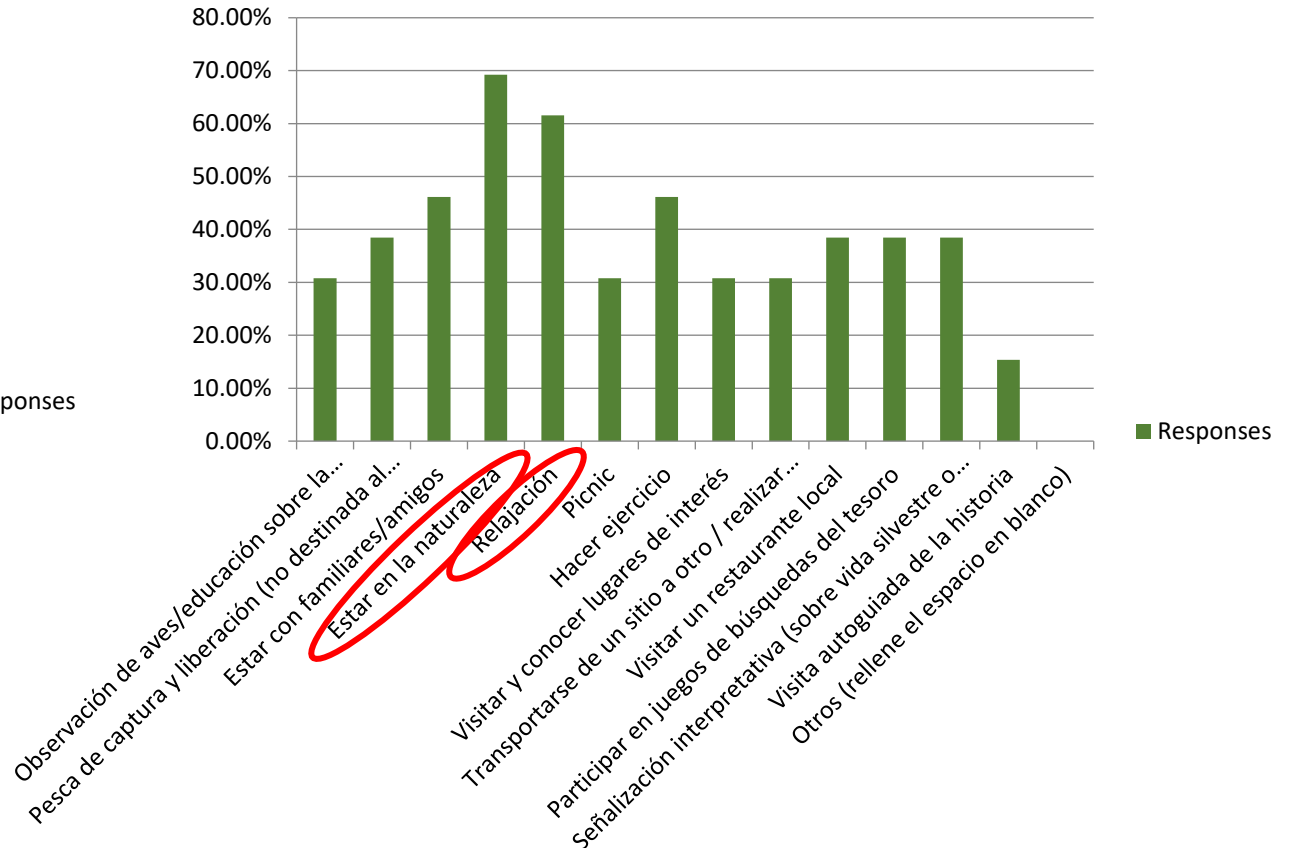
Q4 - What desired activities do you want along the water trail? (choose all that apply)

TOP CHOICES:

1. Being in Nature
2. Relaxing
3. Being with family and friends
4. Birdwatching/Nature education
5. Exercise



ENGLISH language survey response

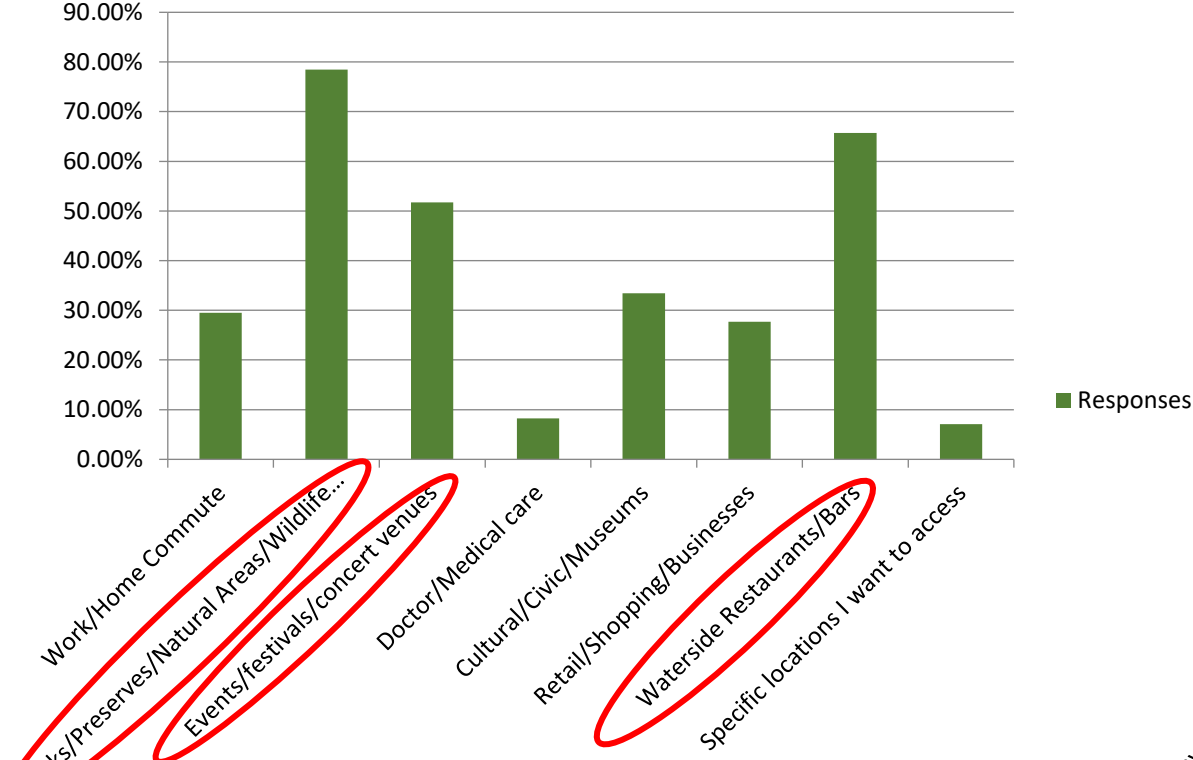


SPANISH language survey response

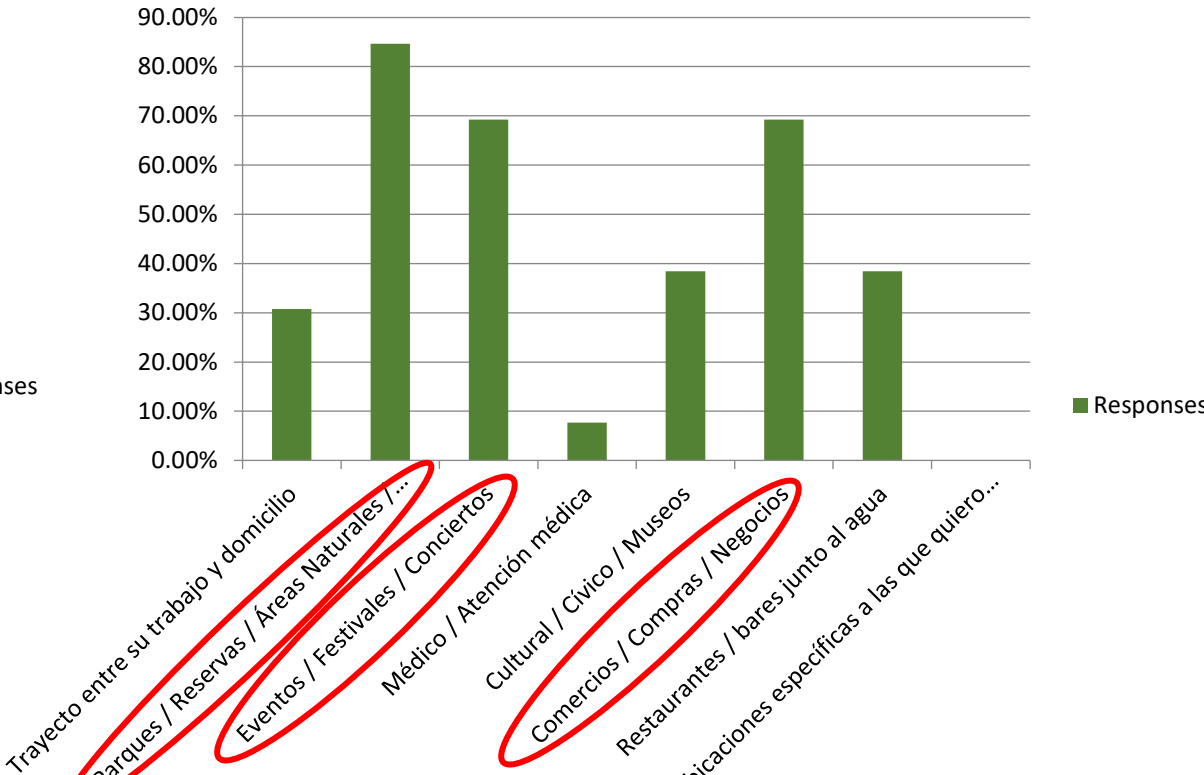
Q5 - Which locations would you want to connect to from the water trail?

TOP CHOICES:

- 1. Parks/Preserves/Nature
- 2. Waterside restaurants / Bars
- 3. Events/ Festivals/ Concert venues



ENGLISH language survey response

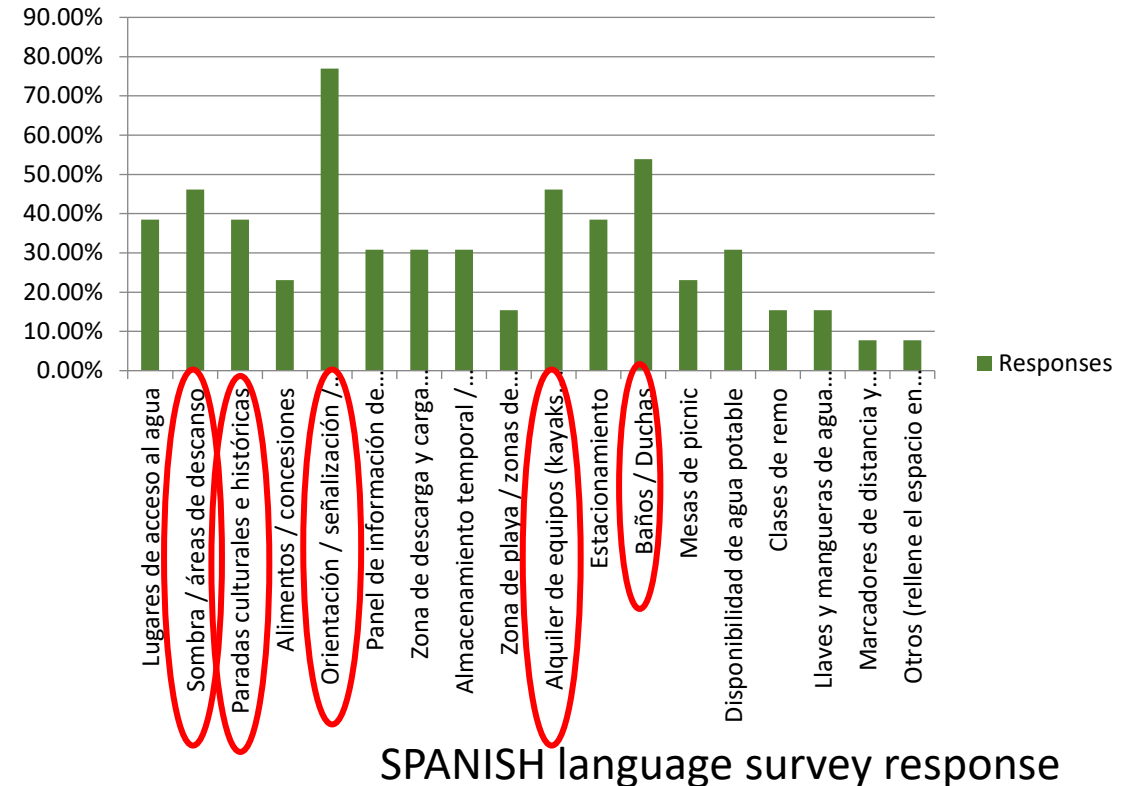
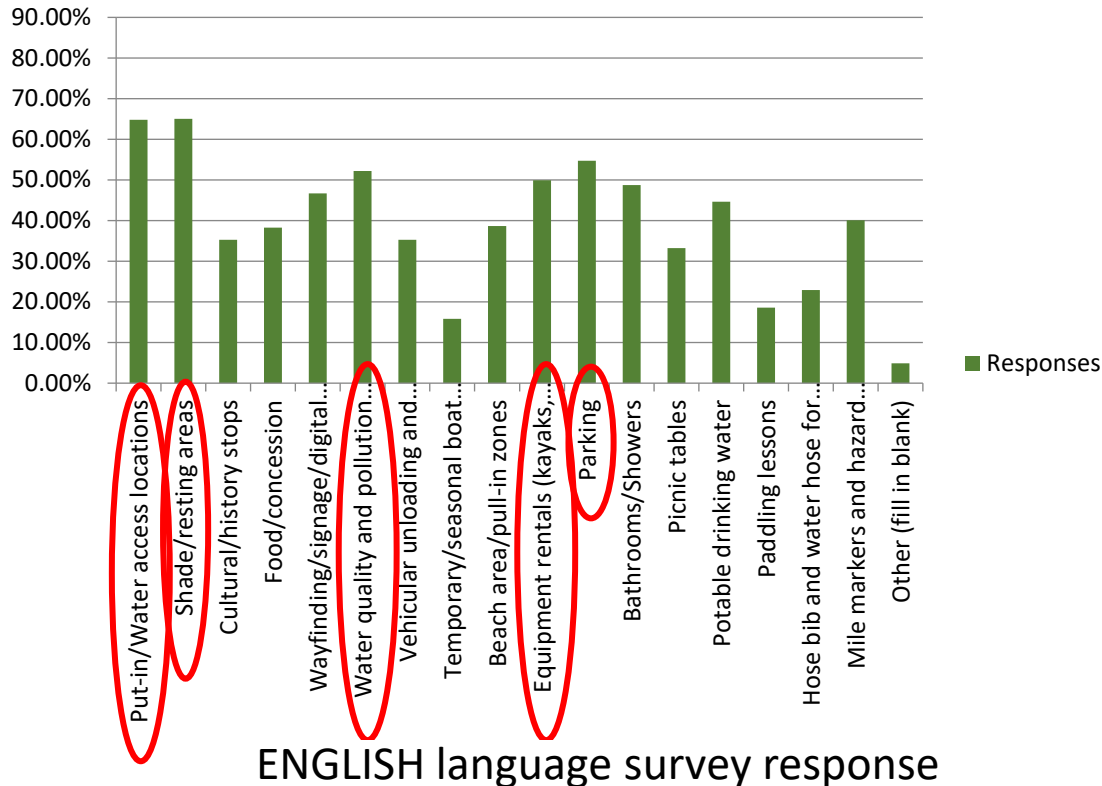


SPANISH language survey response

Q6 - What amenities do you need along the water trail route?

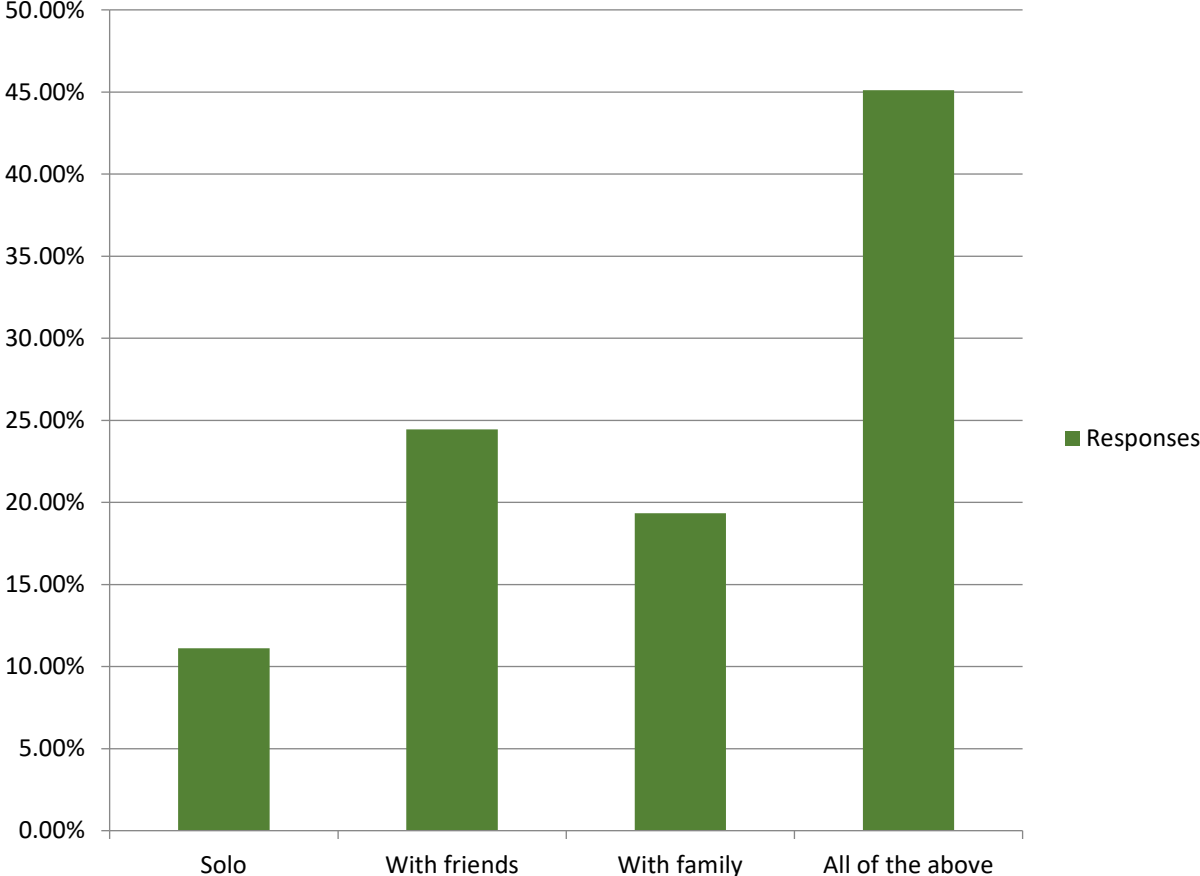
TOP CHOICES:

1. Put-in/ Water Access locations
2. Shade/resting areas
3. Water quality/pollution alerts
4. Parking
5. Equipment rentals (kayaks, canoes, SUPs)
6. Wayfinding/signage
7. Cultural / history stops



Q7 - With whom are you most likely to use the water trail?

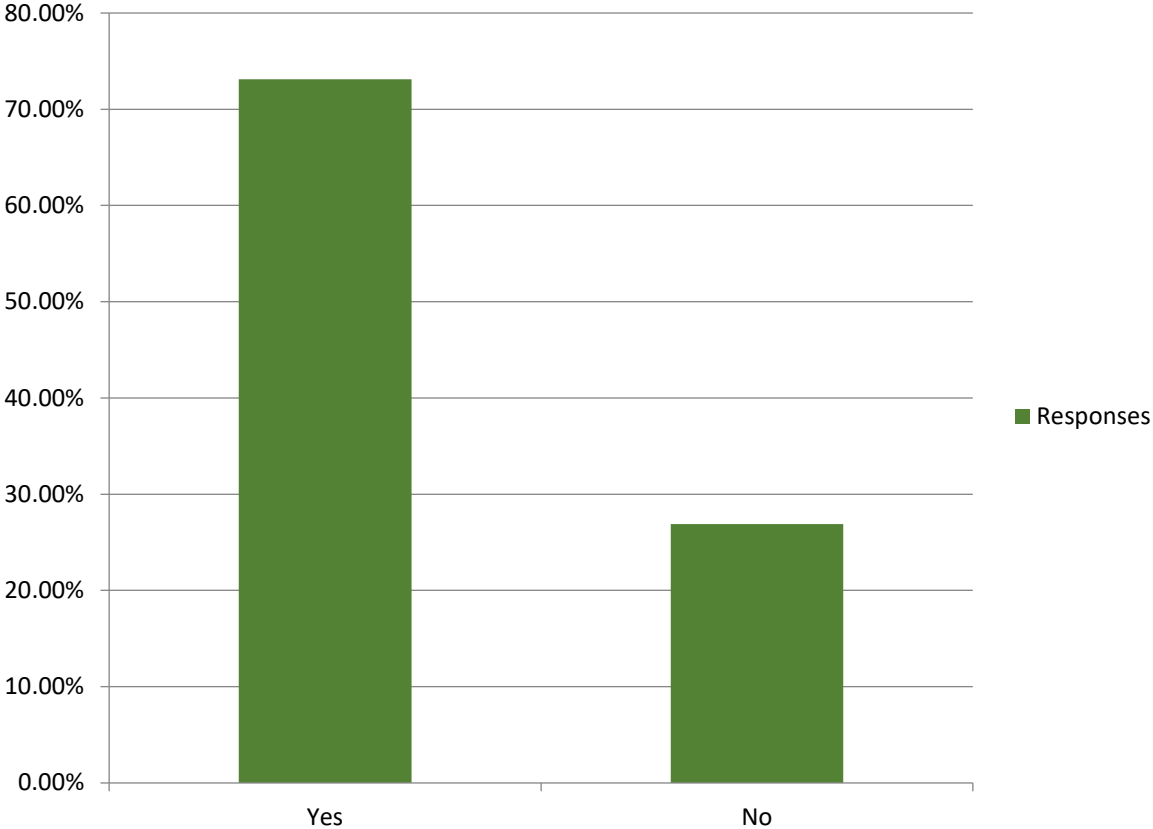
ALL OF THE ABOVE:
Solo
With Friends
With Family



Q8 - Do you want/need to be able to rent a kayak, canoe, SUP?

**MAJORITY
RESPONDED:
YES!**

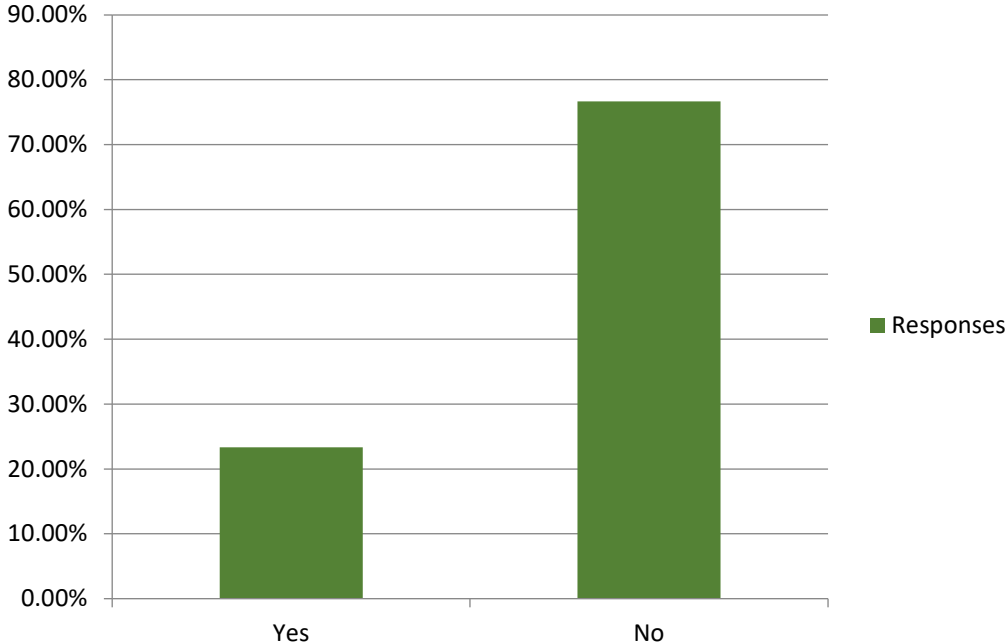
*Concerns/questions
about affordability
were mentioned in
free response*



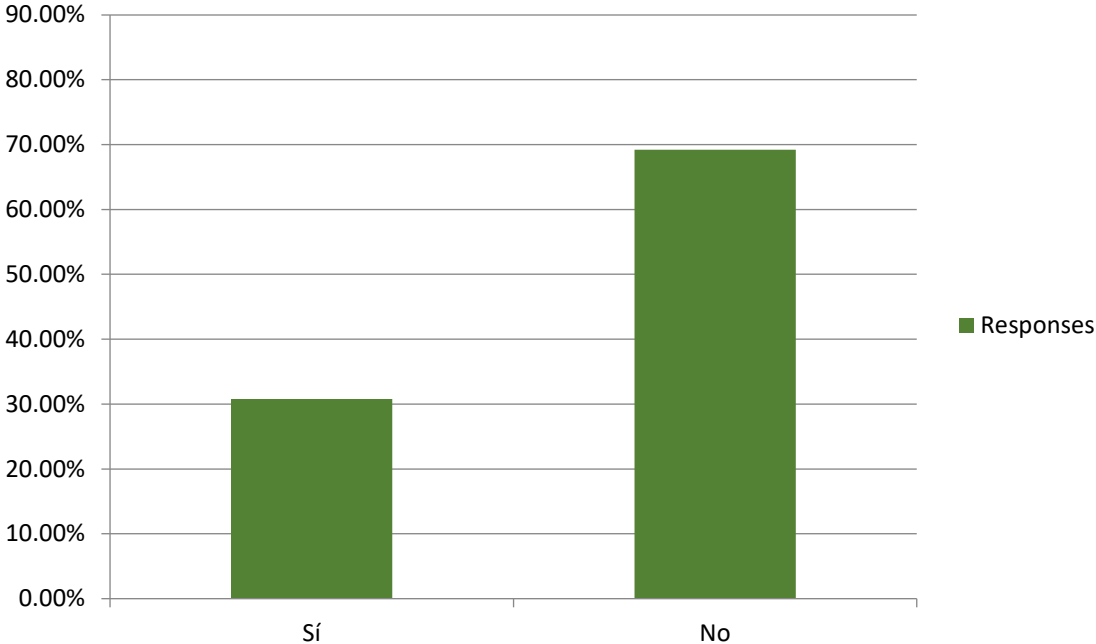
Q11 - Do you require any specific accessibility accommodations?

106 out of 426 responded YES. See specifics in follow-up response.

CONCLUSION: Universally-accessible put-in locations and amenities should be integrated into the plan to support inclusivity for all members of the community.

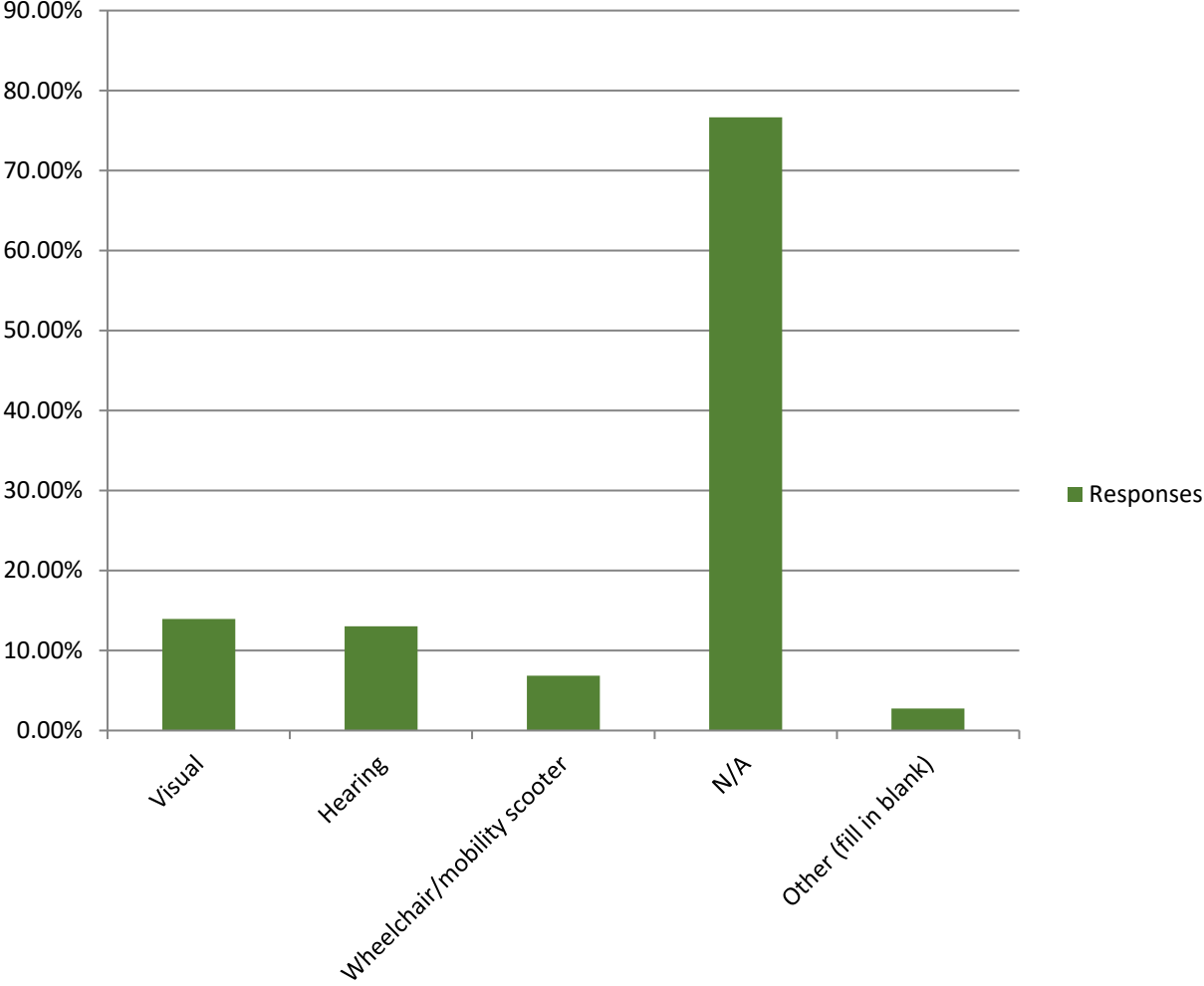


ENGLISH language survey response



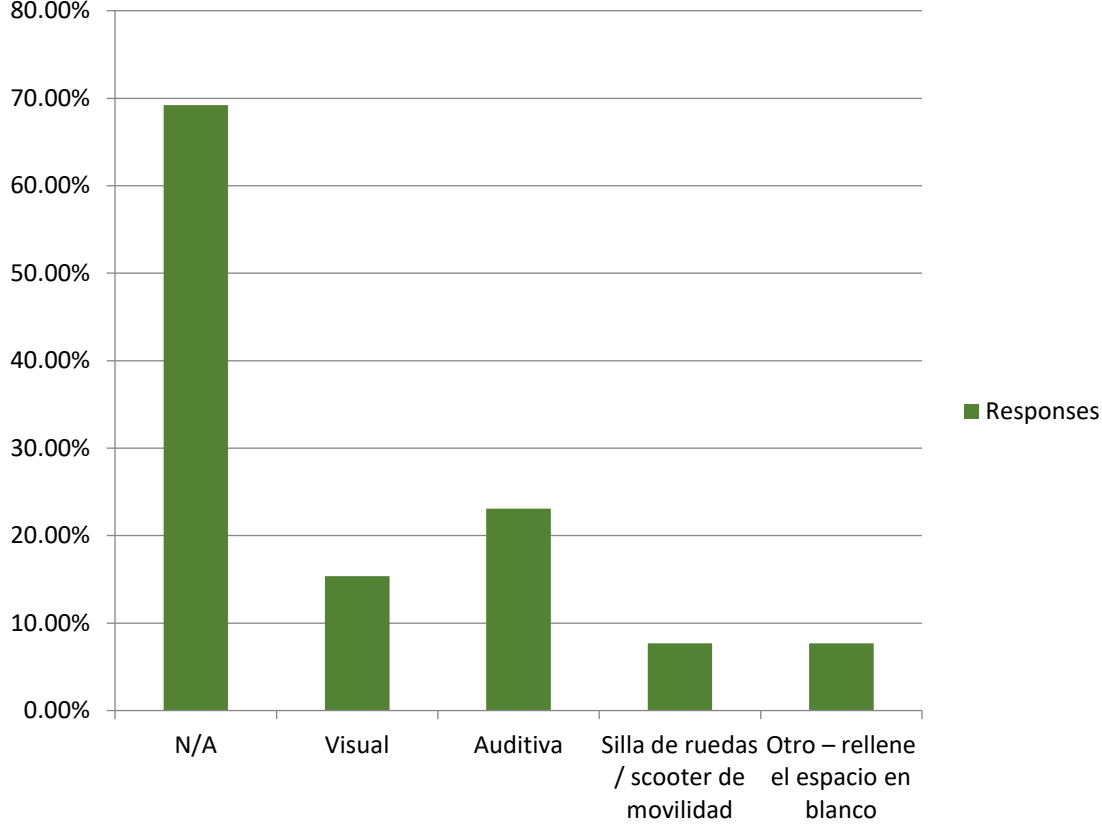
SPANISH language survey response

Q12 - If yes, please specify: (choose all that are relevant)



ENGLISH language survey response

CONCLUSION: Universally-accessible put-in locations and amenities should be integrated into the plan to support inclusivity for all members of the community.



SPANISH language survey response

**ATTACHMENT C:
DATA DICTIONARY**

A description of the data compiled as part of the Suitability Criteria is provided in the table below. The Suitability Criteria was utilized to evaluate potential Blueway access points (ingress/egress sites) and is discussed in further detail in the Results section of the memo.

Suitability Criteria	Description	Data Source
Access Feasibility		
Access Type	Identifies the site as Existing or Proposed access.	Combination of Project Advisory Team input and Field Assessment
Ownership	Indicates whether the ownership is Public or Private	Desktop Assessment: Maryland State Department of Assessments and Taxation (SDAT) Real Property Database
Promenade Easement Status	Indicates promenade easement status; choice of: <ul style="list-style-type: none"> • Private, Complete • Public, Complete • Public/Private, Complete • Private, Temporary • Public Temporary • n/a 	Desktop Assessment: Baltimore City Department of Planning Promenade Easement Status Maps
Physical Condition	Qualitative rating of the physical condition of the site; choice of: <ul style="list-style-type: none"> • Good • Fair • Poor (missing planks, rotting wood, unstable shoreline edge due to erosion, etc.) 	Field Assessment
Overall Site Suitability Characterization	Rates the overall suitability of the site: <ul style="list-style-type: none"> • High • Medium • Low 	Field Assessment
Closest Distance to Existing Public Access	Distance to the nearest existing public access in miles	Desktop Assessment: Least Cost Path spatial analysis (ESRI)
Closest Distance to Private Access	Distance to nearest private water access in miles	Desktop Assessment: Least Cost Path spatial analysis (ESRI)

Suitability Criteria	Description	Data Source
Equity Index	Assigns values range from 0 to 1, with higher values indicating greater vulnerability.	Desktop Assessment: CDC/ATSDR Social Vulnerability Index (uses 15 U.S. census variables to identify communities that will most likely need support before, during, and after a hazardous event)
Equity Qualitative Characterization	<ul style="list-style-type: none"> • Low (Low score of 0) • Low to Moderate • Moderate to High • High (High score of 1) 	Desktop Assessment: CDC/ATSDR Social Vulnerability Index (uses 15 U.S. census variables to identify communities that will most likely need support before, during, and after a hazardous event)
Kayak/ Stand Up Paddle Access	Yes/No; Assessment of readiness for kayak/paddleboard access	Field Assessment
Launch Type	Identifies the type of existing or proposed water access; choice of: <ul style="list-style-type: none"> • Fixed Pier • Floating Dock with Gangway • Dock with kayak Launch feature • Boat Ramp • Beach Shoreline • Wetland Shoreline • N/A • Other 	Field Assessment
Access Comments	Field for providing additional access details, as needed	Field Assessment
Estimated Water Depth	Estimated water depth in feet	Field Assessment: boat depth finder reading
Shoreline Edge Type	Identifies the type of shoreline; choice of: <ul style="list-style-type: none"> • Phragmites • Sandy • Rubble/Cobble • Rip Rap • Sheet Piling • Timber Cribbing • Concrete Seawall • Other 	Field Assessment

Suitability Criteria	Description	Data Source
ADA Considerations	Indicates existing conditions that may be applicable for ADA access; choose all that apply: <ul style="list-style-type: none"> • Slope ≤ 8% • Cross Slope ≤ 2% • Handrail along perimeter • Width ≥ 36" • Freeboard ≤ 8" (distance from water surface to top deck) • Non-slip surface (e.g., aluminum, PVC composite decking, etc.) • N/A • Other 	Field Assessment
Physical Constraints	Constraints identified to location access; choice of: <ul style="list-style-type: none"> • No Access Road/Path • Gate/Fencing • N/A • Other 	Field Assessment
Additional Comments	Field for providing additional comments as needed	Field Assessment
Supportive Infrastructure		
Existing Parking Lots/Street Parking	Identifies the presence of (Yes, No, Limited) and type (Street, Lot, Garage) of nearby parking	Desktop Assessment: Visual analysis using aerial photography
Water Taxi Stop	Identifies if there is an existing or proposed water taxi stop in near proximity to the site; choice of: <ul style="list-style-type: none"> • Yes • Yes, but space to avoid conflict • No • No • Proposed • Proposed Near 	Desktop Assessment: Water Taxi Routes
Public Transportation, Bus	Distance in miles to the closest bus station	Desktop Assessment: Proximity analysis tools (ESRI)
Public Transportation, Light Rail	Distance in miles to the closest light rail station	Desktop Assessment: Proximity analysis tools (ESRI)

Suitability Criteria	Description	Data Source
Trail and Bike Lane Proximity	Distance in miles to the closest bike lane/trail.	Desktop Assessment: Proximity analysis tools (ESRI)
Supportive Amenities		
Restaurant Proximity	Distance in miles to the nearest restaurant	Desktop Assessment: Proximity analysis tools (ESRI)
Existing Picnic Area/ Available Space	Yes/No; If No, then identifies if there is adequate space to establish a picnic area (minimum space requirement:10' x 8').	Field Assessment
Available Space for Storage	Yes/No; identifies if there is adequate space to establish storage for a 2 across kayak rack (minimum space requirement: 7' W x 6.5' L x 6.5' H)	Field Assessment
Existing Bathroom/ Available Space	Yes/No; If No, then identifies if there is adequate space to establish a permanent bathroom (minimum space requirement: 15' x 15')	Field Assessment
Existing Trash Can/ Available Space	Yes/No; If No, identifies if there is adequate space to provide trash cans (minimum space requirement: 3' x 4')	Field Assessment
Other Amenities	Y/N field to indicate if additional amenities exist at the potential access site	Field Assessment
Other Amenities Comments	Field to describe additional amenities	Field Assessment
Categorization		
Site Classification	Suitability Criteria was utilized to categorize potential access points into either: <ul style="list-style-type: none"> • Key Access Points • High Priority • Medium Priority • Low Priority • Rest Stop 	Desktop Assessment
Additional Classification	Indicates sites that meet the criteria for both a prioritization (Key Access, High Priority, or Medium Priority) and the criteria for Rest Stop	Desktop Assessment

ATTACHMENT D: ACCESS POINT SUITABILITY CRITERIA TABLE

Potential Access Point		Access Feasibility								
Site ID	Launch Name	Access Type	Ownership	Promenade Easement Status	Physical Condition	Overall Site Suitability	Closest Distance to Existing Public Access (Miles)	Closest Distance to Existing Private Access (Miles)	Equity (SVI) Index	Equity (SVI) Qualitative Characterization
1	Downtown Sailing Center	Existing	Private, Emergency	Public/Private, Complete	Fair	High	0.621574	0.166174	0.0222	Low Vulnerability
2	Baltimore Museum of Industry	Existing	Private	Public/Private, Complete	Good	High	0.636758	0.31555	0.0222	Low Vulnerability
3	Harbour View	Proposed	Public	Private, Complete	Poor	Medium	0.51076	0.144478	0.0222	Low Vulnerability
4	Harbour View Condo - Example for entire Promenade	Proposed	Public	Private, Complete	Good	Medium	0.51076	0.133954	0.0222	Low Vulnerability
5	Rusty Scupper Water Taxi	Existing	Private, Emergency	Public, Complete	Good	Medium	0.214711	0.360512	0.2446	Low Vulnerability
6	Science Center	Existing	Public	Public, Complete	Good	Medium	0.284977	0.702767	0.2446	Low Vulnerability
7	Harbor Place	Existing	Public	Public, Complete	Good	High	0.284977	0.754084	0.2446	Low Vulnerability
8	Living Classrooms	Proposed	Public	Public, Complete	Good	Medium	0.580478	0.466842	0.0968	Low Vulnerability
9	Fells Point- Bond Street Wharf	Existing	Private	Public, Complete	Poor	Medium	0.406964	0.153163	0.0968	Low Vulnerability
10	Harbor Point	Existing	Private	Public, Complete	Good	Low	0.438679	0.153163	0.0968	Low Vulnerability
11	Tide Point, Locust Point (Site 1)	Existing	Private	Private, Complete	Good	High	0.039582	0.40767	0.0219	Low Vulnerability
12	Water Taxi Access (Tide Point, Locust Point, Site 2)	Existing	Public	Private, Complete	Good	High	0.039582	0.581722	0.0219	Low Vulnerability
13	Thames Street	Proposed	Public	Private, Temporary	Good	Medium	0.588481	0.716238	0.0968	Low Vulnerability
14	Canton	Proposed	Public	Public, Complete	Poor	Medium	0.521576	0.649333	0.0674	Low Vulnerability
15	Professor Trashwheel	Existing	Public	Public, Complete	Poor	Medium	0.58	0.621304	0.0674	Low Vulnerability
16	Canton Waterfront Park	Existing	Public	Public, Temporary	Good	High	0.9	1.095105	0.0424	Low Vulnerability
17	Fort McHenry	Existing	Private	n/a	Good	High	1.466307	1.597564	0.0219	Low Vulnerability
18	Sagamore Distillery	Proposed	Public	n/a	Fair	Low	0.743301	1.171614	0.0039	Low Vulnerability
19	Ferry Bar Park	Existing	Public	n/a	Good	High	0.281166	0.428313	0.0613	Low Vulnerability
20	Nick's Fish House	Existing	Private	n/a	Good	High	0.337794	1.584385	0.0613	Low Vulnerability
22	West Covington Park	Proposed	Public	n/a	Good	Medium	0.399375	0.197912	0.0613	Low Vulnerability
24	Baltimore Rowing Club at Middle Branch Park	Existing	Public	n/a	Good	High	0.356622	0.49876	0.9503	High Vulnerability
25	Swann Park	Proposed	Public	n/a	Good	Low	0.879586	0.851752	0.0613	Low Vulnerability
26	Ridgely's Cove	Proposed	Public	n/a	Good	Low	1.32	1.331647	0.591	Moderate to High Vulnerability
27	Masonville Cove	Existing	Private	n/a	Good	High	0.994286	1.584385	n/a	data unavailable
28	Patapsco Mouth	Existing	Public	n/a	Good	Medium	0.208055	0.92466	0.7488	Moderate to High Vulnerability
29	Patapsco Northside	Existing	Public	n/a	Good	Medium	0.208055	1.132714	0.7488	Moderate to High Vulnerability
30	Southwest Area Park	Existing	Public	n/a	Good	High	1.039442	2.172156	n/a	data unavailable
31	Broening Park	Existing	Public	n/a	Good	High	0.281166	0.337794	0.7488	Moderate to High Vulnerability
32	Westport	Proposed	Public	n/a	Good	Low	0.6987	0.88388	0.849	High Vulnerability
35	Pier 5	Existing	Public	Public, Complete	Good	Medium/High	0.464711	0.214711	0.2446	Low Vulnerability
36	Harbor East Water Taxi Stop	Existing	Public	Public, Complete	Good	Medium	0.177134	0.219855	0.3687	Low to Moderate Vulnerability
37	Professor Trashwheel	Existing	Public	Public, Complete	<Null>	Medium	0.58	0.621304	0.0674	Low Vulnerability

Potential Access Point								
Site ID	Launch Name	Kayak/Stand Up Paddle Access	Access Comments	Launch Type	Launch Type (Other)	Estimated Water Depth (feet)	Shoreline Edge Type	Shoreline Edge (Other)
1	Downtown Sailing Center	Yes	Large boulders/rubble may need to be relocated and area needs to be cleaned up	Beach Shoreline	<Null>	0.5	Rubble/Cobble	<Null>
2	Baltimore Museum of Industry	Yes	<Null>	Dock with Kayak Launch Feature	<Null>	15	Other	Floating dock
3	Harbour View	No	Would need ramp and floating launch	Other	Bulkheaded promenade, 6 ft to waterlevel	24	Sheet Piling	<Null>
4	Harbour View Condo - Example for entire Promenade	No	8 ft high promenade	Floating Dock with Gangway	<Null>	41	Concrete Seawall	<Null>
5	Rusty Scupper Water Taxi	Yes	Water taxi station	Other	Floating dock	22	Concrete Seawall	<Null>
6	Science Center	Yes	Limited parking	Dock with Kayak Launch Feature	<Null>	14	Other	Platform at water level
7	Harbor Place	Yes	Very public	Fixed Pier	<Null>	19	Other	Platform at waters edge
8	Living Classrooms	No	sidewalk grade 4.5 ft to water level	Floating Dock with Gangway	<Null>	4	Concrete Seawall	<Null>
9	Fells Point- Bond Street Wharf	Yes	Needs repair and ramp access to floating docks, kayak launch structure exists	Floating Dock with Gangway	<Null>	10	Timber Cribbing	<Null>
10	Harbor Point	Yes	<Null>	Floating Dock with Gangway	<Null>	22	Concrete Seawall	<Null>
11	Tide Point, Locust Point (Site 1)	Yes	Balt dragon boat club	Floating Dock with Gangway	<Null>	8	Sheet Piling	<Null>
12	Water Taxi Access (Tide Point, Locust Point, Site 2)	Yes	<Null>	Fixed Pier	<Null>	30	Rubble/Cobble	<Null>
13	Thames Street	No	Public parking on thames, not most straightforward connection and probably not ADA	N/A	<Null>	8	Concrete Seawall	<Null>
14	Canton	No	5 ft to water level, connected to promenade	Floating Dock with Gangway	<Null>	8	Concrete Seawall	<Null>
15	Professor Trashwheel	Yes	Dock needs improvement	Fixed Pier	<Null>	3	Phragmites	<Null>
16	Canton Waterfront Park	Yes	Parking and access to main road	Boat Ramp	<Null>	0.5	Rip Rap	<Null>
17	Fort McHenry	Yes	Unclear how to get to the launch. There are barb-wire fences at site and no clear path to entrance, tucked away	Floating Dock with Gangway	<Null>	5	Other	Masonry stone wall
18	Sagamore Distillery	No	Fencing along shoreline, private property. Site is ready for use but not public and no good step down to water from top of bank	Beach Shoreline	<Null>	0.5	Other	Rubble/Cobble/Sand beach
19	Ferry Bar Park	Yes	Sandy cobble beach, good place for dropping in and could be rental location	Beach Shoreline	<Null>	0.5	Sandy	<Null>
20	Nick's Fish House	Yes	Parking for Nicks	Floating Dock with Gangway	<Null>	8	Rip Rap	<Null>
22	West Covington Park	Yes	Parking at west cove park	Boat Ramp	<Null>	4	Rip Rap	<Null>
24	Baltimore Rowing Club at Middle Branch Park	Yes	Parking for put in available	Dock with Kayak Launch Feature	<Null>	7	Other	Vegetated banks above riprap parking for drop in available
25	Swann Park	No	Hard to walk down to water with kayak now but possible	Boat Ramp	<Null>	0.5	Rip Rap	<Null>
26	Ridgely's Cove	No	Locked gate to concrete stairs to fixed floating trash rack, multiple floating booms in waterway	Floating Dock with Gangway	<Null>	<Null>	Concrete Seawall	<Null>
27	Masonville Cove	Yes	Hike from parking	Floating Dock with Gangway	<Null>	7	Other	Living shoreline
28	Patapsco Mouth	Yes	Good parking but distance to walk kayak3	Fixed Pier	<Null>	3	Rip Rap	<Null>
29	Patapsco Northside	<Null>	<Null>	Fixed Pier	<Null>	<Null>	Phragmites	<Null>
30	Southwest Area Park	Yes	Boat access or fixed dock	Boat Ramp	<Null>	0.5	Phragmites	<Null>
31	Broening Park	Yes	Good free parking	Boat Ramp	<Null>	0.5	Rip Rap	<Null>
32	Westport	<Null>	no roads to site, no existing infrastructure	N/A	<Null>	<Null>	Rip Rap	<Null>
35	Pier 5	Yes	water taxi stop?	Floating Dock with Gangway	<Null>	<Null>	Concrete Seawall	<Null>
36	Harbor East Water Taxi Stop	Yes	water taxi stop	Floating Dock with Gangway	<Null>	<Null>	Concrete Seawall	<Null>
37	Professor Trashwheel	<Null>	Dock needs improvement	Fixed Pier	<Null>	3	Phragmites	<Null>

Potential Access Point						
Site ID	Launch Name	ADA Considerations	ADA Considerations (Other)	Physical Constraints	Physical Constraints (Other)	Additional Comments
1	Downtown Sailing Center	Width >= 36", Other	obstacles getting down to the water that would need to be removed, could be stepped over though	Gate/Fencing	<Null>	Gate closed at off hours
2	Baltimore Museum of Industry	Slope <= 8%, Cross Slope <= 2%, Width >= 36", Freeboard <= 8", Nonslip Surface	<Null>	Gate/Fencing	<Null>	Gate and area operated by DSC
3	Harbour View	N/A	<Null>	N/A	<Null>	No existing dock but new dock could have storage, adjacent parking is pay
4	Harbour View Condo - Example for entire Promenade	N/A	<Null>	<Null>	<Null>	Adjacent public street for drop off
5	Rusty Scupper Water Taxi	Slope <= 8%, Cross Slope <= 2%, HandrailAlongPerimeter, Width >= 36", Nonslip Surface	<Null>	N/A	<Null>	Conflict with water taxi, picnic space rash field
6	Science Center	CrossSlope <= 2%, Width >= 36"	<Null>	<Null>	<Null>	Bathrooms possibly at rash field/visitors center
7	Harbor Place	CrossSlope <= 2%, Freeboard <= 8", Other	has a small ramp to get down to water but unclear if ADA compliant	N/A	<Null>	Very crowded, public parking, good site stop and would need good storage
8	Living Classrooms	N/A	<Null>	N/A	<Null>	End of canal, living classrooms adjacent, restaurants around, stormwater outlet pumped out here
9	Fells Point- Bond Street Wharf	N/A, Other	No visible step down/ramp to get from bulkhead to kayak platform	<Null>	<Null>	Disrepair
10	Harbor Point	Slope <= 8%, Cross Slope <= 2%, Width >= 36", Freeboard <= 8", Nonslip Surface	<Null>	Gate/Fencing	<Null>	Too much potential conflict
11	Tide Point, Locust Point (Site 1)	Width >= 36", Handrail Along Perimeter	<Null>	Gate/Fencing	<Null>	<Null>
12	Water Taxi Access (Tide Point, Locust Point, Site 2)	Slope <= 8%, Cross Slope <= 2%, Width >= 36"	<Null>	N/A	<Null>	Water taxi/Connector stop, area to put in will be protected from wave energy
13	Thames Street	N/A	<Null>	N/A	<Null>	<Null>
14	Canton	N/A, Other	uneven and unmaintained surface	N/A	<Null>	Would need removal of metal and repair to hardscape, potential conflicts with boats coming in/out of slips
15	Professor Trashwheel	Slope <= 8%, Cross Slope <= 2%, Width >= 36"	<Null>	N/A	<Null>	Better attraction site than place to put in, lots of trash on bottom, stairs down to the water were observed
16	Canton Waterfront Park	Width >= 36", Other	access to boat ramp appeared steep but unobstructed slope	<Null>	<Null>	Good for kayak drop in
17	Fort McHenry	CrossSlope <= 2%, Width >= 36", Nonslip Surface	<Null>	NoAccessRoad/Path	<Null>	Picnic area is McHenry park; lots of fetch along Middle Branch
18	Sagamore Distillery	N/A	<Null>	Gate/Fencing,NoAccessRoad/Path	<Null>	<Null>
19	Ferry Bar Park	N/A	<Null>	N/A	<Null>	Good parking
20	Nick's Fish House	<Null>	<Null>	Gate/Fencing	<Null>	<Null>
22	West Covington Park	N/A	<Null>	Gate/Fencing	<Null>	Cove offers protection from waves
24	Baltimore Rowing Club at Middle Branch Park	ADA Compliant	<Null>	<Null>	<Null>	<Null>
25	Swann Park	N/A	<Null>	Gate/Fencing	<Null>	Long distance to drag kayak from car, ballfield right against the shoreline
26	Ridgely's Cove	N/A	<Null>	Gate/Fencing	<Null>	Booms prevent downstream access
27	Masonville Cove	CrossSlope <= 2%, Slope <= 8%, Handrail Along Perimeter, Width >= 36", Nonslip Surface, Freeboard <= 8"	<Null>	N/A	<Null>	<Null>
28	Patapsco Mouth	Handrail Along Perimeter, Cross Slope <= 2%, Width >= 36"	<Null>	N/A	<Null>	Needs slight work to make launch from shoreline possible. Currently difficult getting dwn riprap
29	Patapsco Northside	Handrail Along Perimeter, Width >= 36", Cross Slope <= 2%	<Null>	<Null>	<Null>	Unknown development uphill
30	Southwest Area Park	Slope <= 8%, Cross Slope <= 2%, Width >= 36"	<Null>	Other	Unclear if there is a gate at park entrance	<Null>
31	Broening Park	Slope <= 8%, Cross Slope <= 2%, Width >= 36"	<Null>	N/A	<Null>	711 up the hill
32	Westport	NA	<Null>	<Null>	<Null>	future development might bring reason to visit
35	Pier 5	Slope <= 8%, Cross Slope <= 2%, Width >= 36"	<Null>	<Null>	<Null>	Conflict with water taxi; bit of a haul from parking lot; parking lot is public pay lot; given location good emergency and pit stop
36	Harbor East Water Taxi Stop	Slope <= 8%, Cross Slope <= 2%, Width >= 36"	<Null>	<Null>	<Null>	parking here makes this a challenging site; may be good for emergency access
37	Professor Trashwheel	Slope <= 8%, Cross Slope <= 2%, Width >= 36"	<Null>	N/A	<Null>	Better attraction site than place to put in, lots of trash on bottom, stairs down to the water were observed

Potential Access Point		Supportive Infrastructure					Supportive Amenities				
Site ID	Launch Name	Existing Parking Lots/Street Parking	Water Taxi Stops	Public Transportation, Bus (miles)	Public Transportation, Light Rail (miles)	Trail & Bike Lane Proximity (Miles)	Restaurant Proximity (Miles)	Existing Picnic Area	Picnic Area Visible from Water	Sufficient Space for Picnic Area	Available Space for Storage
1	Downtown Sailing Center	Yes, Lot	No	0.13	1.15	0.03	0.18	Yes	Yes	<Null>	Yes
2	Baltimore Museum of Industry	Yes, Lot	No	0.07	1.06	0.01	0.1	Yes	Yes	<Null>	Yes
3	Harbour View	Yes, Lot	No	0.08	0.94	0.01	0.05	No	<Null>	<Null>	Yes
4	Harbour View Condo - Example for entire Promenade	No	No	0.03	0.81	0.01	0.26	No	<Null>	<Null>	No
5	Rusty Scupper Water Taxi	Yes, Lot/Garage	Yes, but space to avoid conflict	0.09	0.68	0.01	0.17	Yes	Yes	<Null>	No
6	Science Center	Limited, Street	Yes, but space to avoid conflict	0.1	0.44	0.02	0.05	Yes	Yes	<Null>	Yes
7	Harbor Place	Limited, Street	Yes	0.07	0.41	0.02	0.07	Yes	Yes	<Null>	Yes
8	Living Classrooms	Limited, Street	No	0.16	1.16	0	0.02	No	<Null>	<Null>	No
9	Fells Point- Bond Street Wharf	Yes, Street/Lot	No	0.1	1.38	0.01	0.05	Yes	Yes	<Null>	Yes
10	Harbor Point	Yes, Street	Yes	0.18	1.43	0.02	0.04	Yes	Yes	<Null>	No
11	Tide Point, Locust Point (Site 1)	Yes, Lot	No	0.43	1.62	0.01	0.25	Yes	Yes	<Null>	Yes
12	Water Taxi Access (Tide Point, Locust Point, Site 2)	Limited, Street	Yes	0.44	1.65	0.04	0.27	Yes	Yes	<Null>	No
13	Thames Street	Limited, Street	No	0.19	1.67	0.02	0.13	No	<Null>	<Null>	No
14	Canton	Limited, Street	No	0.09	1.9	0.05	0.11	Yes	Yes	<Null>	Yes
15	Professor Trashwheel	Limited, Street	No	0.11	2.09	0.02	0.14	Yes	Yes	<Null>	Yes
16	Canton Waterfront Park	Yes, Lot	Yes, but space to avoid conflict	0.07	2.54	0.03	0.18	Yes	Yes	<Null>	Yes
17	Fort McHenry	No	No	0.16	2.25	0.92	0.79	Yes	Yes	<Null>	Yes
18	Sagamore Distillery	Yes, Private	No	0.09	1.31	0.44	0.41	No	<Null>	<Null>	Yes
19	Ferry Bar Park	Yes	No	0.36	1.22	0.24	0.36	Yes	Yes	<Null>	Yes
20	Nick's Fish House	Yes, Private	Proposed	0.1	0.95	0.32	0.06	No	<Null>	<Null>	Yes
22	West Covington Park	Yes, Lot	No	0.06	0.89	0.36	0.11	Yes	Yes	<Null>	Yes
24	Baltimore Rowing Club at Middle Branch Park	Yes, Lot	Proposed Near	0.11	0.67	0.04	0.58	Yes	Yes	<Null>	Yes
25	Swann Park	Yes, Lot	No	0.33	0.66	0.41	0.47	Yes	No	<Null>	Yes
26	Ridgely's Cove	No	No	0.21	0.37	0.01	0.45	No	<Null>	<Null>	No
27	Masonville Cove	No	No	0.64	1.78	0.82	1.41	Yes	Yes	<Null>	Yes
28	Patapsco Mouth	Yes, Lot	No	0.2	1.08	0.02	0.87	Yes	Yes	<Null>	Yes
29	Patapsco Northside	Yes, Lot	No	0.28	0.92	0.06	1.03	Yes	No	<Null>	No
30	Southwest Area Park	Yes, Lot	No	0.44	0.55	0.96	1.87	Yes	Yes	<Null>	Yes
31	Broening Park	Yes, Lot	No	0.16	0.99	0.02	0.36	Yes	Yes	<Null>	No
32	Westport	Yes, Private	Proposed	0.29	0.22	0.11	0.83	<Null>	<Null>	<Null>	No
35	Pier 5	Yes, Lot	Yes	0.19	1	0.01	0.03	Yes	Yes	<Null>	No
36	Harbor East Water Taxi Stop	Limited, Street	Yes	0.26	1.2	0.01	0.06	No	No	<Null>	No
37	Professor Trashwheel	Limited, Street	No	0.11	2.09	0.02	0.14	Yes	Yes	<Null>	Yes

ATTACHMENT D: ACCESS POINT SUITABILITY CRITERIA TABLE

Potential Access Point								Categorization	
Site ID	Launch Name	Existing Bathroom	Sufficient Bathroom Space?	Existing Trash Can	Sufficient Trash Can Space?	Other Amenities	Other Amenities Comments	Site Classification	Additional Classification
1	Downtown Sailing Center	No	Yes	Yes	<Null>	Yes	Parking lot, running water, shaded pavilion, benches, walking to 711, royal farms, restaurants, etc.	High Priority	Emergency Access
2	Baltimore Museum of Industry	No	No	Yes	<Null>	Yes	Running water, walking to royal farms, restaurants, coffee	Key Access Points	Rest Stop
3	Harbour View	No	No	No	Yes	Yes	Restaurant, coffee	High Priority	Rest Stop
4	Harbour View Condo - Example for entire Promenade	No	No	No	Yes	No	<Null>	High Priority	<Null>
5	Rusty Scupper Water Taxi	No	No	No	Yes	Yes	Restaurant	Medium Priority	Rest Stop
6	Science Center	No	No	Yes	<Null>	Yes	Food stands, science, visitors center, lacking drop off/parking access	Medium Priority	Rest Stop
7	Harbor Place	Yes	<Null>	Yes	<Null>	Yes	Restaurants	Medium Priority	Rest Stop
8	Living Classrooms	No	No	Yes	<Null>	No	<Null>	High Priority	<Null>
9	Fells Point- Bond Street Wharf	No	No	Yes	<Null>	Yes	Restaurants, 711, parking not too far	High Priority	<Null>
10	Harbor Point	No	<Null>	Yes	<Null>	Yes	Restaurants and shops - Fells Point	Low Priority	<Null>
11	Tide Point, Locust Point (Site 1)	No	No	Yes	<Null>	Yes	Power	Key Access Points	Rest Stop
12	Water Taxi Access (Tide Point, Locust Point, Site 2)	No	No	No	Yes	Yes	Street parking	Rest Stop	<Null>
13	Thames Street	No	No	No	Yes	Yes	Walkable to restaurants	High Priority	Rest Stop
14	Canton	No	Yes	No	Yes	No	<Null>	High Priority	Rest Stop
15	Professor Trashwheel	No	No	No	Yes	Yes	Food, coffee across the street	Attraction	<Null>
16	Canton Waterfront Park	Yes	<Null>	Yes	<Null>	Yes	Benches, food and shopping close by, park space for picnics, plenty of adjacent public parking	Key Access Points	Rest Stop
17	Fort McHenry	No	No	No	Yes	Yes	Picnic benches	Medium Priority	Rest Stop
18	Sagamore Distillery	No	Yes	No	Yes	Yes	Sagamore spirits, food	Medium Priority	Rest Stop
19	Ferry Bar Park	No	Yes	Yes	<Null>	No	<Null>	Key Access Points	Rest Stop
20	Nick's Fish House	No	No	No	Yes	Yes	Restaurant	Rest Stop	<Null>
22	West Covington Park	No	No	No	Yes	No	<Null>	High Priority	Rest Stop
24	Baltimore Rowing Club at Middle Branch Park	Yes	<Null>	No	Yes	No	<Null>	Key Access Points	Rest Stop
25	Swann Park	Yes	<Null>	No	Yes	Yes	Ball fields, parking	Low Priority	<Null>
26	Ridgely's Cove	No	No	No	Yes	No	<Null>	Low Priority	<Null>
27	Masonville Cove	No	<Null>	No	Yes	No	<Null>	Medium Priority	Rest Stop
28	Patapsco Mouth	No	Yes	Yes	<Null>	Yes	Benches	Medium Priority	Rest Stop
29	Patapsco Northside	No	No	No	Yes	No	<Null>	Medium Priority	Rest Stop
30	Southwest Area Park	No	Yes	No	Yes	Yes	Plenty of parking, walking trails	Key Access Points	Rest Stop
31	Broening Park	No	Yes	Yes	<Null>	No	<Null>	Key Access Points	Rest Stop
32	Westport	<Null>	<Null>	<Null>	<Null>	No	<Null>	Low Priority	<Null>
35	Pier 5	No	No	Yes	No	No	Restaurant; along waterfront promenade	Rest Stop	<Null>
36	Harbor East Water Taxi Stop	No	No	Yes	No	No	Restaurants, shopping; along waterfront promenade	Rest Stop	<Null>
37	Professor Trashwheel	No	No	No	Yes	Yes	Food, coffee across the street	High Priority	<Null>

APPENDIX D: BALTIMORE BLUEWAY IMPLEMENTATION MATRIX

Site Name	Site Status	Priority	Existing Launch or Shoreline Type	Water Depth (ft)	Ownership/ Easement Status	Proposed Site Amenities						Proposed Paddler Access Improvements						Cost Estimate				
						Blueway Signage	Blueway Sculptural Element	Benches/ Seating ²	Designated Loading/ Unloading Zone (curb painting/ signage)	Hose Bibb ¹	App-Based Kayak Storage/ Lockers ²	Picnic Table ²	Prefab Restroom ²	Shoreline/ Site Improvements	Trash Can ²	ADA Compatible Launch w/ Screw Piles	ADA Compatible Launch w/ Driven Piles		Beach Launch	Kayak Lift	Rub Rails	
Baltimore Peninsula	Existing	Medium	Beach Shoreline	0.5	Private, n/a	X	X		X		X				X							\$ 98,520.00
Boston Street Pier	Existing	Medium	Fixed Pier	3	Public, Complete	X	X		X	X	X				X				X			\$ 102,620.00
Broening Park	Existing	Medium	Boat Ramp and Fixed Pier	0.5	Public, n/a	X	X	X	X	X	X		X								X	\$ 179,670.00
Canton Waterfront Park	Existing	High	Boat Ramp	0.5	Public, Temporary	X	X		X	X	X		X						X			\$ 327,970.00
Ferry Bar Park	Existing	Medium	Beach Shoreline and Boat Ramp	0.5	Public, n/a	X	X		X	X	X		X						X			\$ 327,970.00
Hull Street Pier	Existing	Medium	Floating Dock with Gangway	8	Private, Complete	X	X		X		X						X					\$ 247,570.00
Middle Branch Park	Existing	High	Dock with Kayak Launch Feature	7	Public, n/a	X	X			X	X		X		X				X			\$ 328,850.00
Southwest Area Park	Existing	Medium	Boat Ramp and Fixed Pier	0.5	Public, n/a	X	X	X		X	X	X	X		X						X	\$ 181,550.00
Baltimore Museum of Industry	Proposed	Medium	Beach Shoreline	15	Private, Complete	X	X		X		X			X								\$ 172,570.00
Fells Point- Bond Street Wharf	Proposed	Medium	Floating Dock with Gangway	10	Private, Complete	X	X		X		X										X	\$ 247,570.00
Harbor Point	Proposed	Ongoing	Floating Dock with Gangway	22	Private, Complete	X	X		X												X	\$ 232,570.00
Inner Harbor	Proposed	High	Floating Dock	8	Public, Complete	X	X		X	X	X						X					\$ 147,970.00
Middle Branch Fitness and Wellness Center	Proposed	Medium	Fixed Pier	3	Public, n/a	X	X								X					X		\$ 87,150.00
West Covington Park	Proposed	Long-Term	Rip Rap Shoreline	4	Private, n/a	X	X								X		X					\$ 133,450.00
Westport	Proposed	Ongoing	Rip Rap Shoreline	n/a	Private, n/a	X	X		X		X				X		X					\$ 148,520.00
Fort McHenry	Proposed Rest Stop	Long-Term	Floating Dock with Gangway	5	Public, n/a	X	X				X											\$ 97,500.00
Harborplace	Proposed Rest Stop	Ongoing	Fixed Pier	19	Public, Complete	X	X				X											\$ 97,500.00
Masonville Cove	Proposed Rest Stop	Long-Term	Floating Dock with Gangway	7	Public, n/a	X	X				X						X					\$ 147,500.00
Harbor East	Proposed Rest Stop	Long-Term	Floating Dock with Gangway	n/a	Public, Complete	X	X				X						X					\$ 147,500.00
National Aquarium Water Taxi Stop	Proposed Rest Stop	High	Fixed Pier with Gangway	n/a	Public, Complete	X	X				X											\$ 97,500.00
<i>1: Cost is for hose bibb only and does not include work or supplies associated with extending the water supply line</i>																						
<i>2: Cost is for site amenity only (e.g., trash can) and does not include cost associated with delivery, installation, grading/leveling, or pouring a concrete pad</i>																						
<i>n/a: data not available</i>																						

Cost Estimates for Proposed Improvements

Improvement	Cost Estimate
Site Amenities	
Blueway Signage	\$ 7,500.00
Blueway Sculptural Element	\$ 75,000.00
Benches/Seating	\$ 1,000.00
Designated Loading/Unloading Zone Sign	\$ 70.00
Hose Bibb	\$ 400.00
App-Based Kayak Storage / Lockers (4 unit)	\$ 15,000.00
Picnic Table	\$ 1,000.00
Prefab Restroom	\$ 80,000.00
Shoreline/Site Improvements	\$ 75,000.00
Trash Can	\$ 950.00
Paddler Access Improvements	
ADA Compatible Launch with screw piles	\$ 50,000.00
ADA Compatible Launch with driven piles	\$ 150,000.00
Beach Launch	\$ 150,000.00
Kayak Lift	\$ 3,700.00
Rub Rails	\$ 700.00

PREPARED FOR



PREPARED BY



WITH FUNDING FROM

