

We can never have enough of nature.

Henry David Thoreau





RECREATION, PUBLIC PARKLAND, AND OPEN SPACE

View from the Monocacy National Battlefield

Recreation and the World Outdoors

Research has found that exposure to and connections with nature provide many benefits to humans, such as well-being, calmness, and mental clarity. The concept of Biophilia, advanced by German psychologist Erich Fromm and more recently by biologist E.O. Wilson, is defined as humans' innate need to affiliate with other life such as plants and animals, and our inherent desire and liking to be near nature, based on the fact that we have spent the majority of our evolutionary history closely connected to nature.

The advancement and proliferation of technology has created a 'wired and connected' world, where people—even children—are glued to electronic devices and media for hours every day. This results in less physical activity, higher obesity rates, and less time exploring and discovering the natural world. Ecologists, naturalists, and environmental educators refer to this as Nature Deficit Disorder, a term first used by Richard Louv in his 2005 book, *Last Child in the Woods*, which describes general societal alienation from nature, and the hypothesis that it could possibly result in behavioral problems. "Forest therapy" and "forest bathing" are concepts now being promoted by therapists and health professionals to enable people to reduce stress while reconnecting with the natural world.

In 2008, the State of Maryland created the Partnership for Children in Nature to ensure that "all Maryland young people have the opportunity to learn about their environment, connect with the natural world, and grow to become good environmental stewards." The Partnership Plan resulted in a change to State law that now requires every high school student to complete a designated course of study on environmental literacy (COMAR 13A.03.02).

Parks and Policy

As the conversion and development of land to meet human needs for housing, employment, and services continue, so will the need grow for acquisition of land for public access, enjoyment, and preservation. Sustained and continued focus on planning and funding for open space, public parkland, and Monocacy River access is vitally important for a high quality living environment and to meet the recreational needs of increasing populations in both Frederick and Carroll Counties.

There are many federal, state, and local public lands in the Monocacy River Watershed and along the Monocacy River, offering a wide variety of amenities, from active recreational fields to natural areas for resource protection. However, some of the recreational and scenic attractions in part of the Monocacy River are marred by trash, tires, and incompatible land uses adjacent to the River.

Notable, large River-front public parkland or open space includes the Monocacy National Battlefield and the Chesapeake and Ohio National Park (National Park Service), the Monocacy Natural Resource Management Area (Maryland Dept. of Natural Resource), Pinecliff Park (Frederick County), and Rivermist Park (City of Frederick).



Monocacy River front parkland is not only intended to serve as recreational and aesthetic amenities to residents and visitors, but in some circumstances are intended to act as part of larger conservation efforts for natural resource protection, which can address water quality protection and supply, flood hazard reduction, aquifer recharge, wildlife habitat preservation, and erosion control. This Plan supports and encourages the development of River front parkland in such a way that balances the provision of active and passive recreational amenities, opportunities for River access, and the enhancement or restoration of the natural environment.

The following page illustrates the numerous public parklands, open space, and other publicly-accessible lands that exist in the Monocacy River Watershed.

The State of Maryland, Frederick County and Carroll County all have numerous adopted goals, policies, and action recommendations for the provision of parkland, recreation facilities and amenities, and open space protection. For example, the 2012 Maryland Land Preservation, Parks and Recreation Plan contains overall state goals to:

1. Make a variety of quality recreational environments and opportunities readily accessible to all of its citizens, and thereby contribute to their physical and mental well-being.
2. Recognize and strategically use parks and recreation facilities as amenities to make communities, counties, and the State more desirable places to live, work, and visit.
3. Use State investment in parks, recreation, and open space to complement and mutually support the broader goals and objectives of local comprehensive/master plans.
4. To the greatest degree feasible, ensure that recreational land and facilities for local populations are conveniently located relative to population centers, are accessible without reliance on the automobile, and help to protect natural open spaces and resources.

5. Continue to protect recreational open space and resource land at a rate that equals or exceeds the rate at which land is developed at a statewide level.

Frederick County

Frederick County's goals and policies for parkland, recreation, and open space protection are from the County's Comprehensive Plan are listed below:

- Develop the County's park system with a balance of active parks that focus on a variety of recreational uses and passive parks that focus on less-intensive uses such as trails, picnicking, historic preservation or natural resource protection (SC-P-12)
- Consider stream corridors within community growth areas for development as public linear parks to allow for greenway/trail linkages both within and between community growth areas (SC-P-14)
- Development of parks in a manner that is sensitive to and protective of natural resource and environmentally sensitive features (SC-P-15)
- Develop parks in a manner that prioritizes the preservation of archeological and historic sites and structures (SC-P-17)
- Prioritize funding to accommodate land acquisition for land banking of new sites, and for the expansion of existing parks (SC-P-19)



Frederick County parkland is not only intended to serve as recreational and aesthetic amenities to County residents, but in some circumstances are intended to act as part of a larger Countywide effort for natural resource protection, which can address water quality protection and supply, flood hazard reduction, aquifer recharge, wildlife habitat preservation, and erosion control.

Frederick County's 1999 Bikeways and Trails Plan contains a recommendation for a trail along the Monocacy River from Glade Creek to the Potomac River, but lacks key details such as which side of the River the trail would be located. Since 1999, Frederick County has not actively acquired any access easements or purchased land along the River for a trail in this area.

While this Plan supports the concept of outdoor recreation and close-up experiences with the River that a trail would provide, the inherent challenges (trespassing, littering, maintenance) and difficulties (land acquisition) in actual River trail development must be fully investigated and addressed by Frederick County.

River Definitions (USGS)

Gauging Station--a site on a stream, lake, reservoir or other body of water where observations and hydrologic data are obtained. The U.S. Geological Survey measures stream discharge at gauging stations.

Gage Height--the height of the water surface above the gage datum (zero point). Gage height is often used interchangeably with the more general term, stage, although gage height is more appropriate when used with a gage reading.

Cubic Feet per Second (cfs)--a rate of the flow, in streams and rivers, for example. It is equal to a volume of water one foot high and one foot wide flowing a distance of one foot in one second. One "cfs" is equal to 7.48 gallons of water flowing each second. As an example, if your car's gas tank is 2 feet by 1 foot by 1 foot (2 cubic feet), then gas flowing at a rate of 1 cubic foot/second would fill the tank in two seconds.



Carroll County

County Parkland Goal:

Provide an affordable, coordinated, and comprehensive system of public and private parks, recreational facilities and programs, and open space that will meet the active and passive recreation needs of residents and enhance community design, identity, and vitality.

Carroll County Parkland Policies and Recommendations:

- Fund the majority of additional park facilities through impact fees, Program Open Space funds, grants, and other non-general fund sources.
- Continue to support passive recreational opportunities for the conservation reservoir watersheds and wellhead protection areas.
- Continue to support park and recreational opportunities in conjunction with school facilities' recreational functions.
- Continue to support the creation of open space opportunities.

Carroll County Parkland Recommendations:

- Provide connections between proposed and existing parks and open space and adjoining development, whenever possible.
- Identify recreation sites across the county which can meet the projected needs of the local community.
- Support recreation sites across the county which can meet the projected needs of the local community as identified in the 2012 Land Preservation, Parkland, and Recreation Plan.
- Support the goals, objectives, and recommendations on the 2012 Carroll County Land Preservation, Parkland, and Recreation Plan.

Frederick City

The City of Frederick has secured land along the Monocacy River for trails, open space, river access, public parkland, and forest protection. Major City policies for parkland and recreation include the following:

- Continue to identify opportunities for additional parks and open space (PR Policy 1)
- Expand the City's trail network to improve pedestrian and bicycle access to parks and regional trails (PR Policy 2)
- Develop Greenway Corridors (PR Policy 3)
- Collaborate with Frederick County and other agencies to enhance parks and recreational facilities for the City's residents (PR Policy 9)

Take Me to The River

To implement Presidential Executive Order 13508, Chesapeake Bay Protection and Restoration, issued by President Obama on May 12, 2009, the ensuing 2010 Federal Strategy for Protecting and Restoring the Chesapeake Bay Watershed contains a goal of conserving land and increasing public access, with a 'Public Access Outcome' of increasing public access to the Bay and its tributaries by adding 300 new public access sites by 2025.

Communities that have major waterways or waterbodies are more rare than common, and possesses opportunities to promote and celebrate these unique natural assets for the community to experience and use. Monocacy River recreation and related tourism provide enjoyment, well-being, and socio-economic activity in Frederick and Carroll Counties.

From fishing, canoeing, kayaking, birding, and swimming, the Monocacy River offers multiple outdoor recreational options. The River's peaceful serenity also promotes silent contemplation, reflection, and renewal. People—both those who live near the River and others from further away—benefit and gain from the opportunities that the River's varied resources offer.



There are ten public access sites along the Monocacy River, including several federal, state, and County River-front parks in addition to the access points. In addition, Carroll has a 10 mile water trail on Double Pipe Creek and Big Pipe Creek with access points at Hapes Mill Road Double Pipe Creek Park - a short paddle away from the Monocacy Scenic River. All access points can accommodate canoes and kayaks and some have ramps for launching small, motorized boats. However, the River is generally shallow and rocky, so large motorized boats are not recommended for use in the Monocacy.

River Levels and Flows

Paddling the River is a fun and relaxing way to experience the River's wonders and wildlife up-close. While the River, under normal flow rates, is relatively calm and slow, preparation, care, and caution are paramount before beginning a floating adventure on the Monocacy River. The ideal time to paddle the Monocacy is in spring to mid-summer and from late fall to winter. The River has a gentle gradient of approximately three feet per mile, resulting in an average paddling speed of about two miles per hour. At average flows, the water velocity is approximately .83 miles per hour. At this rate, it takes three days for water to flow the entire length of the river. Check the following link for the 2014 Monocacy River Water Trail map for more details on paddling the Monocacy River:

<http://news.maryland.gov/dnr/2014/05/08/new-water-trail-guide-helps-paddlers-explore-monocacy-scenic-river-in-frederick-county/>

Below is some reference information and materials to research for an enjoyable and safe paddle on the Monocacy River.

- Edward Gertler's Maryland and Delaware Canoe Trails. This privately published book directed towards paddlers contains information about the Monocacy River and several tributaries including the Big Pipe/Little Pipe/Double Pipe watershed. The book may be found in some book stores, libraries, and on-line shopping sites.
- "Monocacy Scenic River Water Trail" is a map published in 2014 jointly by the Maryland Department of Natural Resources and Frederick County Division of Parks and Recreation. It covers the lower 41.8 miles from the Rt. 77 bridge near Rocky Ridge to the Mouth of the Monocacy, the river's confluence with the Potomac River. Maps are available from government agencies, at the Monocacy National Battlefield, and from the Tourism Council of Frederick County. (<http://news.maryland.gov/dnr/2014/05/08/new-water-trail-guide-helps-paddlers-explore-monocacy-scenic-river-in-frederick-county/> or <http://www.recreator.com/292/Monocacy-Scenic-Water-Trail-Map>)
- The United States Geological Survey (USGS) maintains a website with real time gauge readings for water levels of most rivers of consequence in the U.S., including the Monocacy and several tributaries. The four major gauge stations applicable to the Monocacy are: Bridgeport at the Rt. 140 bridge, the Monocacy Boulevard station in Frederick, the "Jug Bridge" station near the I-70 bridge in Frederick, and the Bruceville station on Big Pipe Creek near Detour. Computer access to these sites can be gained through a link to "River Levels" on the website hosted by the Frederick-based Monocacy Canoe Club: <http://www.monocacycanoe.org/> or <http://md.water.usgs.gov/surfacewater/streamflow>

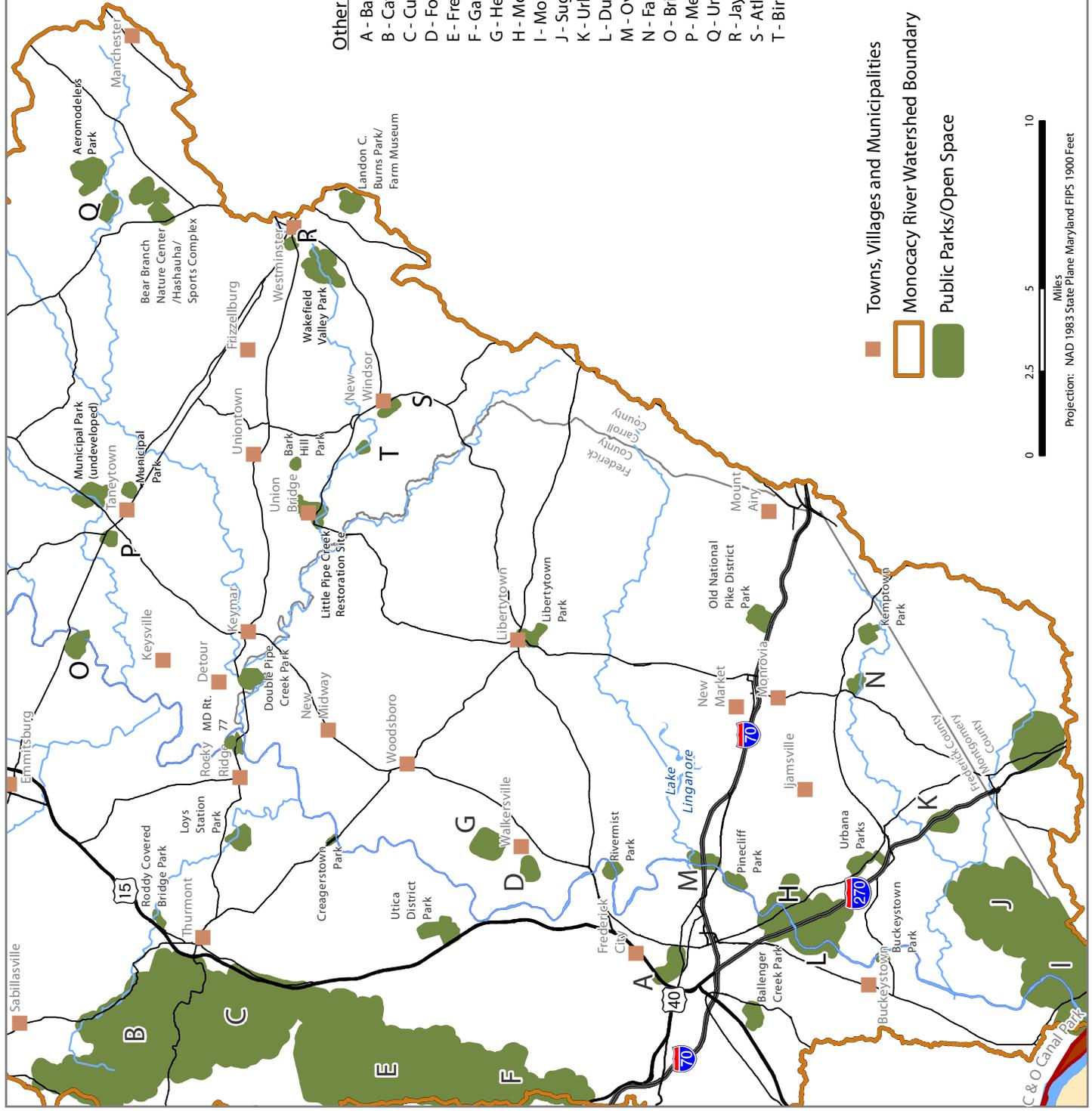


Fifteen-foot River levels occurred on June 27, 2015 and resulted in several water rescues from the Monocacy, including this at Monocacy Boulevard. Note the picture on the right of the same location during normal River flows. The June 27, 2015 River level of 15 feet at Monocacy Boulevard is considered the 'Action Stage' of a flood event at Monocacy Boulevard per the USGS (see Appendix for detailed information on the River's gauges and their application for preparing for a safe and enjoyable paddling trip on the Monocacy River.

For paddlers (canoes and kayaks), minimum water levels are listed in Gertler's guidebook using the Jug Bridge gauge: 2.9 feet for the river above Rt. 77, 2.1 feet between Rt. 77 and Monocacy Blvd., and 1.7 feet for the lower river. The river is usually runnable below Rt. 77 in all but dry periods during summer months. The upper sections of the river can be paddled most frequently during the spring months when the Bridgeport gauge reads above 3.0 feet.

After a period of rain, water levels of the Monocacy River can rise quickly, creating dangerous conditions for the recreational user. Upper safe limits for paddlers cannot be established; however, recreational users should always check the gauges to note rapid fluctuations, including conditions upstream of the sections under consideration. It is advised to also compare the current water levels with historical mean levels for that date, as presented on the gauges.

Parkland and Open Space in the Monocacy River Watershed



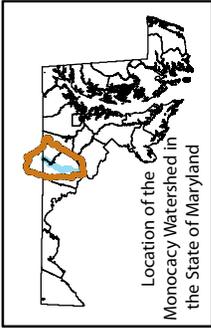
Other Parks & Open Space

- A - Baker Park
- B - Catoctin Mountain Park
- C - Cunningham Falls State Park
- D - Fountain Rock Nature Center
- E - Frederick Municipal Forest
- F - Gambrill State Park
- G - Heritage Farm Park
- H - Monocacy National Battlefield
- I - Monocacy Natural Resources Management Area
- J - Sugarloaf Mountain
- K - Urbana Lake
- L - Dudrow Park
- M - Overlook Park
- N - Fahrney Branch
- O - Bridgeport
- P - Memorial Park
- Q - Union Mills Reservoir
- R - Jaycee Park
- S - Atlee Ridge
- T - Bird Sanctuary

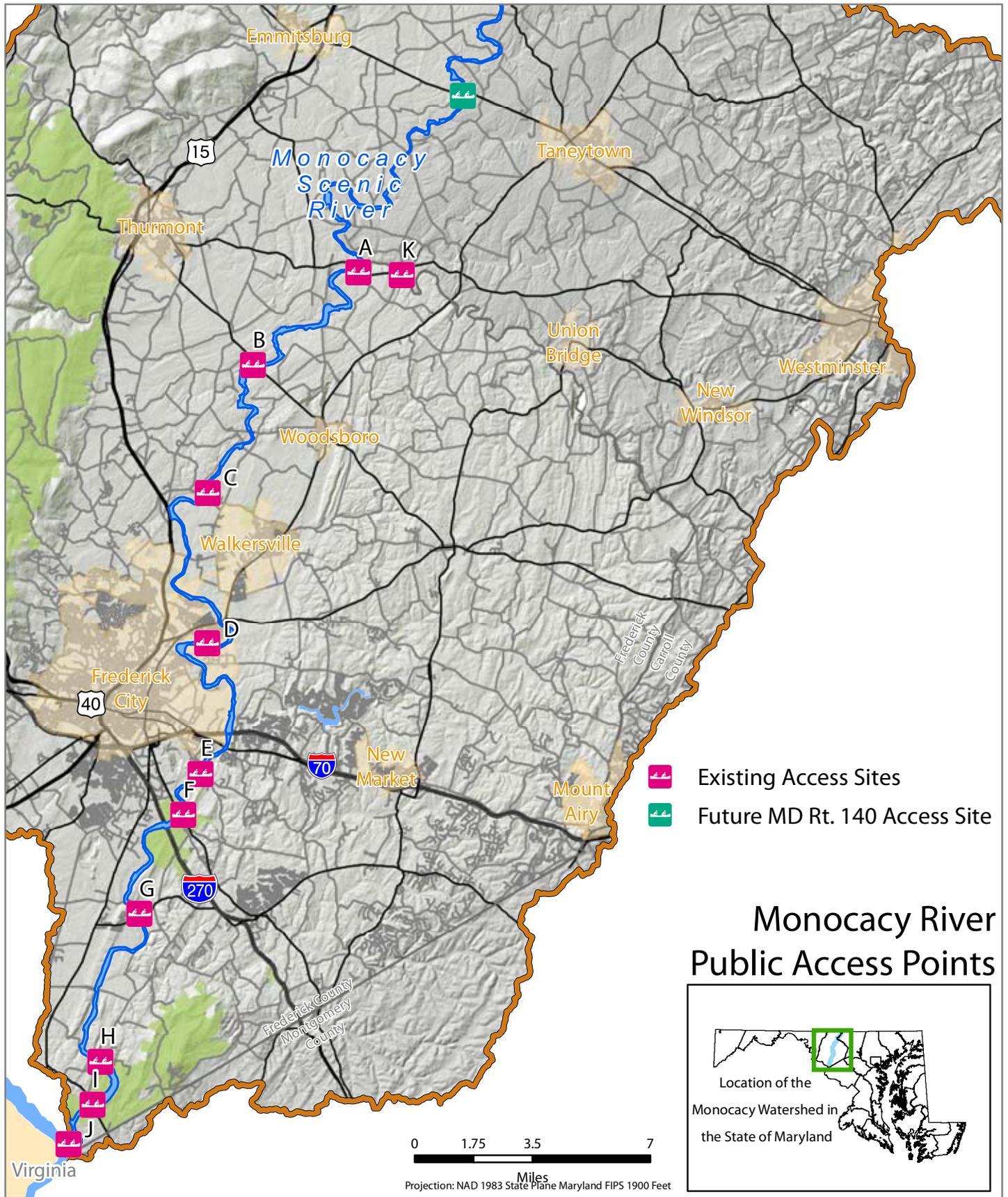
- Towns, Villages and Municipalities
- ▭ Monocacy River Watershed Boundary
- Public Parks/Open Space



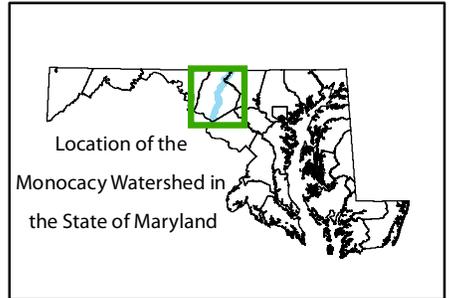
Projection: NAD 1983 State Plane Maryland FIPS 1900 Feet



Source: Frederick County Division of Parks and Recreation, Carroll County Department of Parks and Recreation.



Monocacy River Public Access Points

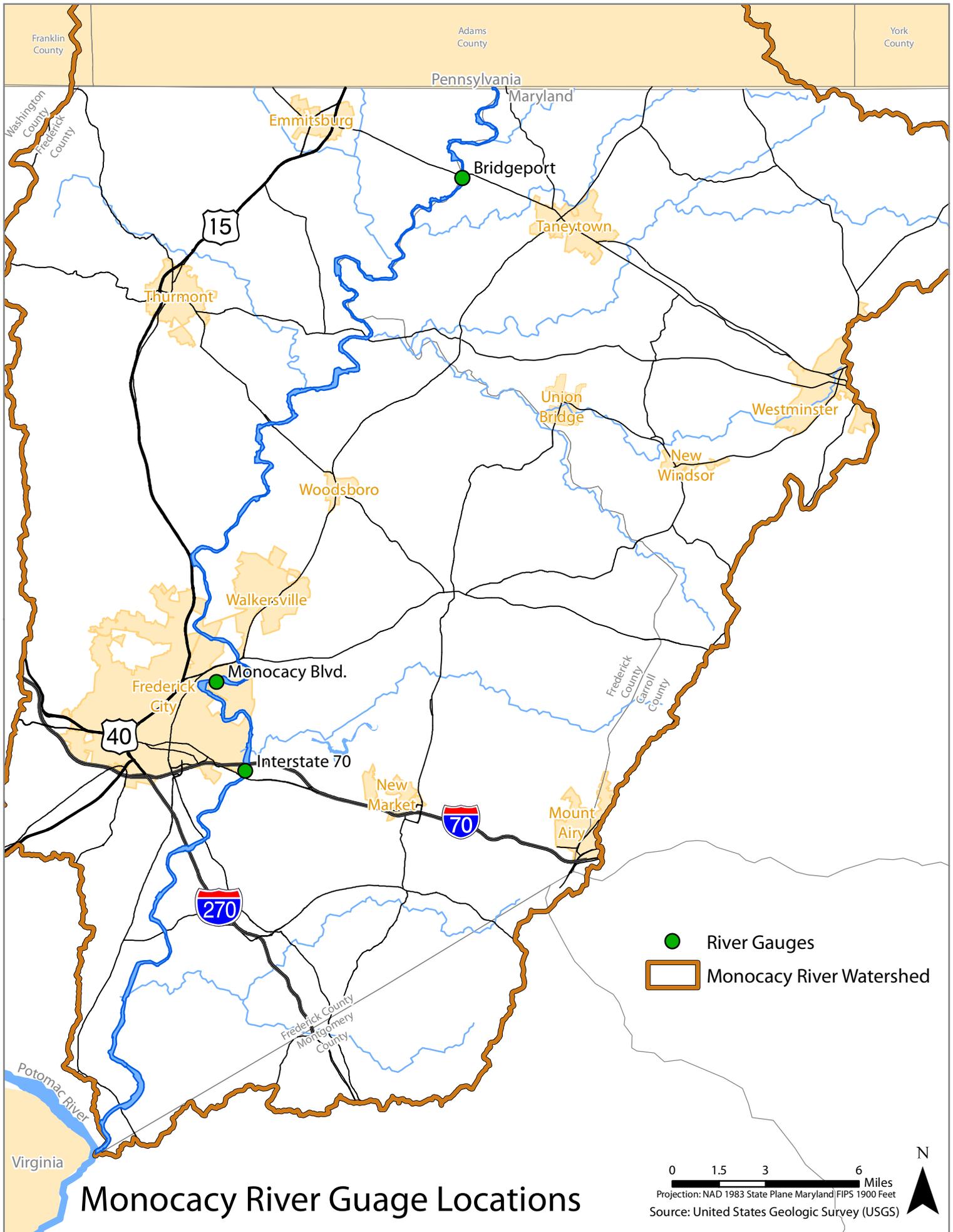


Mileage From The Potomac River

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| <ul style="list-style-type: none"> A. MD Rt. 77 River Access (41.7 miles) B. Creagerstown Park Penterra Manor Lane at Rt. 550 (35.4 miles) C. Devilbiss Bridge Road (29.9 miles) D. Monocacy Boulevard (22.3 miles) E. Pinecliff Park Off Reichs Ford Road (15.7 miles) F. Monocacy National Battlefield MD Rt. 355 (13.9 miles)
(River access is approximately 900 ft. from parking lot and utilizes a boardwalk and natural surface path to reach the river) | <ul style="list-style-type: none"> G. Buckeystown Park Michaels Mill Road and MD Rt. 80 (9.6 miles) H. Park Mills Road (3.8 miles) I. MD Rt.28 (1.9 miles) J. C&O Canal Park near Monocacy Aqueduct Mouth of Monocacy Road, Dickerson MD (.3 miles) K. Double Pipe Creek, MD 77 in Detour |
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Source: Frederick County GIS





Monocacy River Guage Locations

- River Gauges
- Monocacy River Watershed

0 1.5 3 6 Miles
 Projection: NAD 1983 State Plane Maryland FIPS 1900 Feet
 Source: United States Geologic Survey (USGS)



Recommendations

- 8-1) *To create additional opportunities for access to the Scenic Monocacy River, Frederick County (and Carroll County) should accelerate the planning, design, and development of public access points at MD 140 (Bridgeport) and MD 77 (Rocky Ridge) and improve access at Double Pipe Creek Park to serve as a gateway to the Monocacy River*
- 8-2) *The River Board should undertake annual or bi-annual informal inspections of all public River access spots and report problems or issues to the appropriate governing body with operational and maintenance oversight (Frederick County, Frederick City, Maryland Department of Natural Resources, Maryland State Highway Administration, National Park Service)*
- 8-3) *Assist the USGS or State of Maryland, if requested, in the financial operation and maintenance of flow gauges on the mainstem of the Monocacy River*
- 8-4) *Include an ecological resiliency component for climate change adaptation in the management of all public Riverfront parkland and open space.. This could include such things as reforestation, wetland enhancements, proper siting of structures, and invasive plant species control*
- 8-5) *To increase public awareness, appreciation and engagement with the Monocacy River, Frederick County Parks and Recreation should reinstate the public canoe trips offered on the Monocacy River*
- 8-6) *Promote the Monocacy River Corridor as a priority area for land acquisition for open space, river access, passive parkland, habitat and resource protection, and seek sources of funding (federal, state, and local governments, foundations, and NGO's) for purchases of land in the River Corridor*
- 8-7) *Explore and evaluate the creation of a Monocacy River Resource Impact Fee, a fee assigned to all lots recorded in order to help fund the acquisition of River front properties for future open space, parkland, and habitat protection*
- 8-8) *Lobby the local U.S. Congressional delegation for funding from the 'Rivers of the Chesapeake Initiative', (part of the Federal Land and Water Conservation Fund, designed to protect large-scale landscapes for wildlife habitat and protection of water quality and scenic vistas). The 'Rivers' initiative targets lands for acquisition that are adjacent to areas owned by governmental entities, or adjacent to lands already protected through conservation easements. Collaborate with appropriate local and state agencies and target lands along the River from Pinecliff Park south to the Potomac River for acquisition*
- 8-9) *Continue the River Board commitment to increasing public awareness about the Monocacy River and its ecological resources, through public relations and educational programs*
- 8-10) *The River Board should lobby both the Frederick County and Carroll County Boards of Education and offer assistance to develop educational programs for students about the Monocacy River and its rich resources*
- 8-11) *The River Board supports the creation of a community-based and supported watchdog organization for the Monocacy River - a Monocacy River Keeper - modeled after the international Waterkeeper Alliance.*
- 8-12) *The River Board should work to strengthen the Maryland Wild and Scenic Rivers Act to become more effective in providing protection for the Monocacy River.*