



North Fork of the Shenandoah

Scenic River Report

Shenandoah County

Prepared By
Department of Conservation and Recreation
Division of Planning and Recreation Resources

January 2021

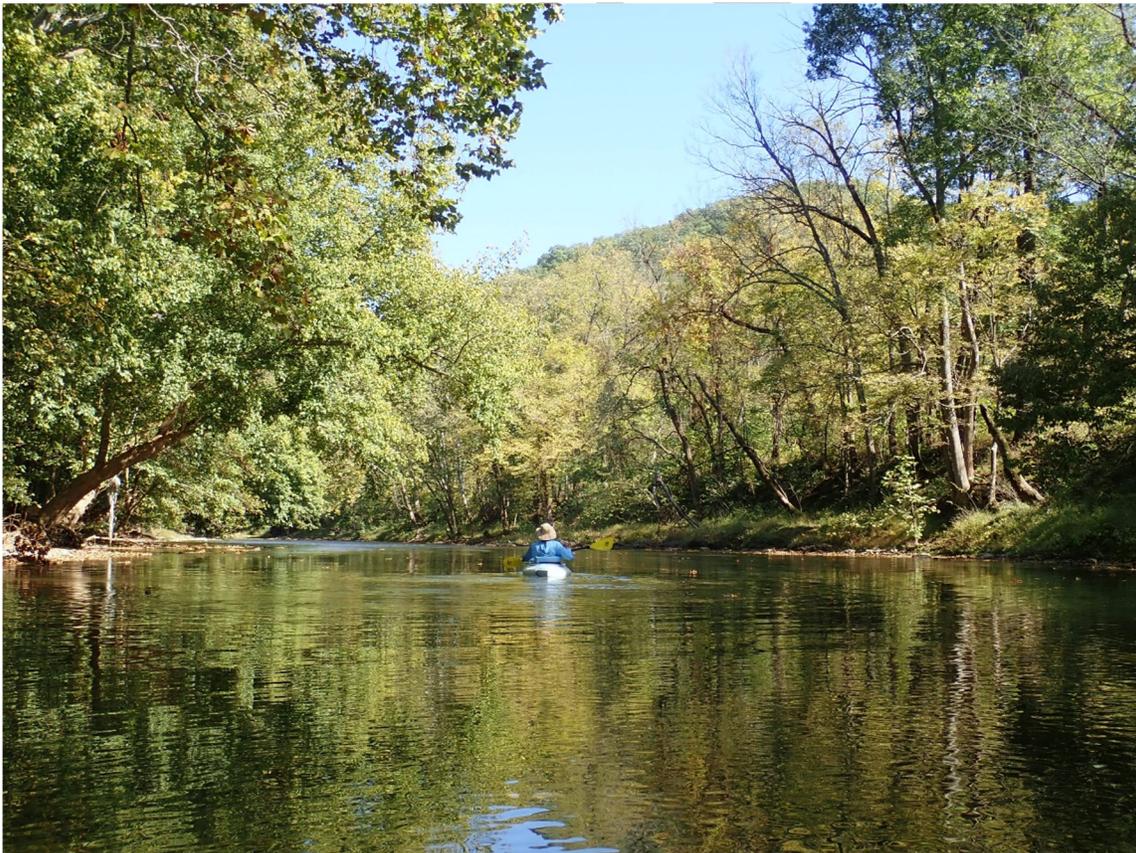


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I. SUMMARY OF FINDINGS

In 2020, the Department of Conservation and Recreation (DCR) completed a Scenic River evaluation for the North Fork (NF) of the Shenandoah River. The river section begins at Chapman Landing boat ramp to the downstream boundary of Seven Bends State Park in Shenandoah County, adjacent to Woodstock, Virginia.

Based on the evaluation, the 8.8 miles were deemed eligible for inclusion in the Virginia Scenic River System. The designation as a Virginia Scenic River is recommended, and it is further recommended that DCR be the administering agency.

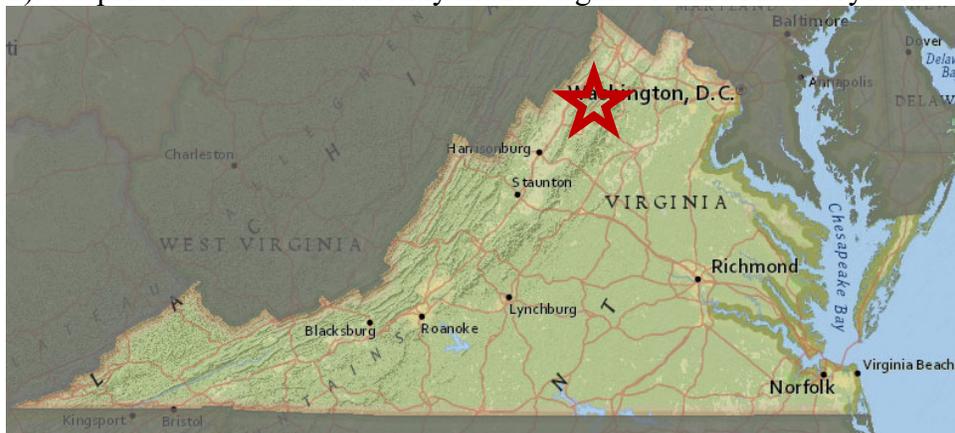
II. REASON FOR THE STUDY

In September 2019, the Shenandoah County Administrator on behalf of the Board of Supervisors requested that DCR evaluate the NF of the Shenandoah River for inclusion in the Virginia Scenic River System. A field evaluation of the river was completed October 7, 2020, wherein DCR concluded that the river segment was eligible for designation. Having the river as a Scenic River will enhance their efforts for recreation, access and tourism.

The [Scenic Rivers Act](#) instructs DCR to conduct, "studies of rivers or sections of rivers to be considered for designation," and to, "recommend to the Governor and to the General Assembly rivers or sections thereof to be considered for designation as Scenic Rivers." This report fulfills this statutory directive.

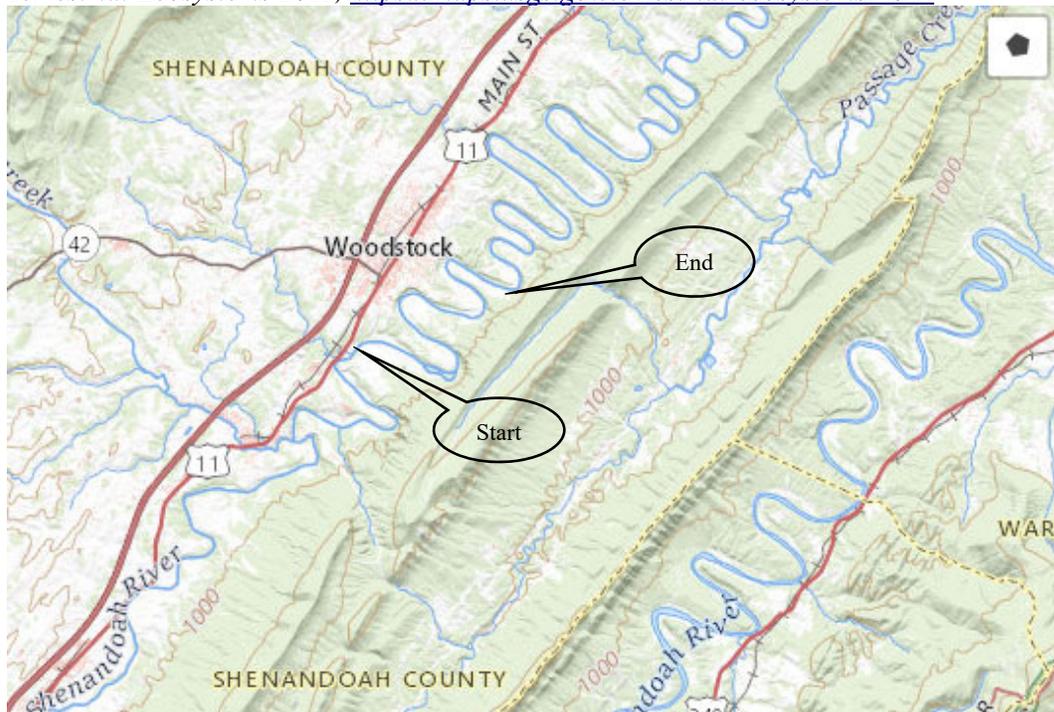
A. History of Scenic River Designation for the NF of the Shenandoah River

The NF of the Shenandoah River was evaluated Chapman Landing boat ramp to the downstream boundary of Seven Bends State Park in Shenandoah County, a distance of 8.8 miles. The river begins and ends in Shenandoah County near Woodstock, Virginia (Map 1, Map 2). No part of the river is currently in the Virginia Scenic Rivers System.



Map 1. The location of NF of the Shenandoah River in Shenandoah County. The NF of the Shenandoah River is a tributary of the South Fork of the Shenandoah River. It is located about 160 miles northwest of the City of Richmond, and about 100 miles southwest of Washington, DC. Source: DCR Natural Heritage Explorer <https://vanhde.org/content/map>

Map 2. The location of NF of the Shenandoah River study in in Shenandoah County, near Woodstock is shown here with the start and ending points of the evaluation. Source: GAP/LANDFIRE National Terrestrial Ecosystems 2011, <https://maps.usgs.gov/terrestrial-ecosystems-2011>



B. Benefits of Designation

The Scenic Rivers Act (the Act), found in Title 10.1, Chapter 4, [§ 10.1-400](#) through 10.1-418.1 of the *Code of Virginia*, was enacted in 1970 as a means of recognizing the Commonwealth's scenic rivers and their immediate environs. In order to be eligible for Scenic River designation, a river must contain “superior natural and scenic beauty, fish and wildlife, and historic, recreational, geologic, cultural, and other assets.”¹ Designated rivers need not include the entire river, and may include tributaries. At the request of the locality(s), DCR evaluates a specified river segment, determines whether or not it qualifies for designation, and writes a report documenting these attributes. This report satisfies this requirement and it will be posted on the DCR website at <https://www.dcr.virginia.gov/recreational-planning/srstudies> .

Since the passage of the Act, 37 river segments, totaling approximately 980 miles, have received Scenic River designation from the General Assembly. A list of those rivers can be found at: <https://www.dcr.virginia.gov/recreational-planning/document/srlist.pdf>

The Virginia Scenic River designation accomplishes the following:

- Allows riparian landowners to continue using their land as they did before designation, except as provided in §10.1-407 (§10.1- 408), <https://law.lis.virginia.gov/vacode/title10.1/chapter4/section10.1-408/>

¹ Code Section § 10.1-400. Definitions. <https://law.lis.virginia.gov/vacode/title10.1/chapter4/section10.1-400/>

- Gives riparian landowners, local citizens, and local governments a greater voice in the planning and implementation of federal and state projects that might affect the river (§10.1-406.1), <https://law.lis.virginia.gov/vacode/title10.1/chapter4/section10.1-406.1/>
- Requires all state agencies to consider visual, natural, and recreational values of a Scenic River in their planning and permitting process (§10.1-402) <https://law.lis.virginia.gov/vacode/title10.1/chapter4/section10.1-402/>
- Requires authorization by the General Assembly for the construction, operation and/or maintenance of any structure, such as a dam, that would impede the natural flow of a Scenic River (§10.1-407), <https://law.lis.virginia.gov/vacode/title10.1/chapter4/section10.1-407/>
- Requires the Federal Energy Commission (FERC) to consider the impact of proposed hydropower or related projects on a designated Scenic River using the Scenic River report developed in the qualification process

The Virginia Scenic River Program is a state-level program for recognizing the uniqueness and quality of a river. Note that the program is different from the National Wild and Scenic Rivers System. The national-level system has a different set of criteria, and requires designation by Congress or the Secretary of the Interior. According to www.rivers.gov, Virginia has approximately 49,350 miles of river, but no congressionally designated Wild and Scenic rivers.

C. Designation Process

Before an evaluation of a potential scenic river, DCR must receive, in hand, a letter from the local governing body, administrator, or manager requesting that a study be conducted. See **APPENDIX C**.

In order to determine whether a river (or river segment) is eligible for Virginia Scenic River designation, it must be evaluated by the following 13 criteria (as described in **APPENDIX E**):

1. River Corridor Vegetation
2. Riverbed and/or River Flow Modifications
3. Human Development of Visual Corridor
4. Historic Features
5. Landscape
6. Quality of Fishery
7. Special Natural Flora and Fauna
8. Water Quality
9. Parallel Roads
10. Crossings
11. Special Features Affecting River Aesthetics
12. Public Recreational Access
13. Land Conservation

An in-depth discussion of the NF of the Shenandoah River's assets is completed in **Section IV: ENVIRONMENTAL ANALYSIS** (page 7).

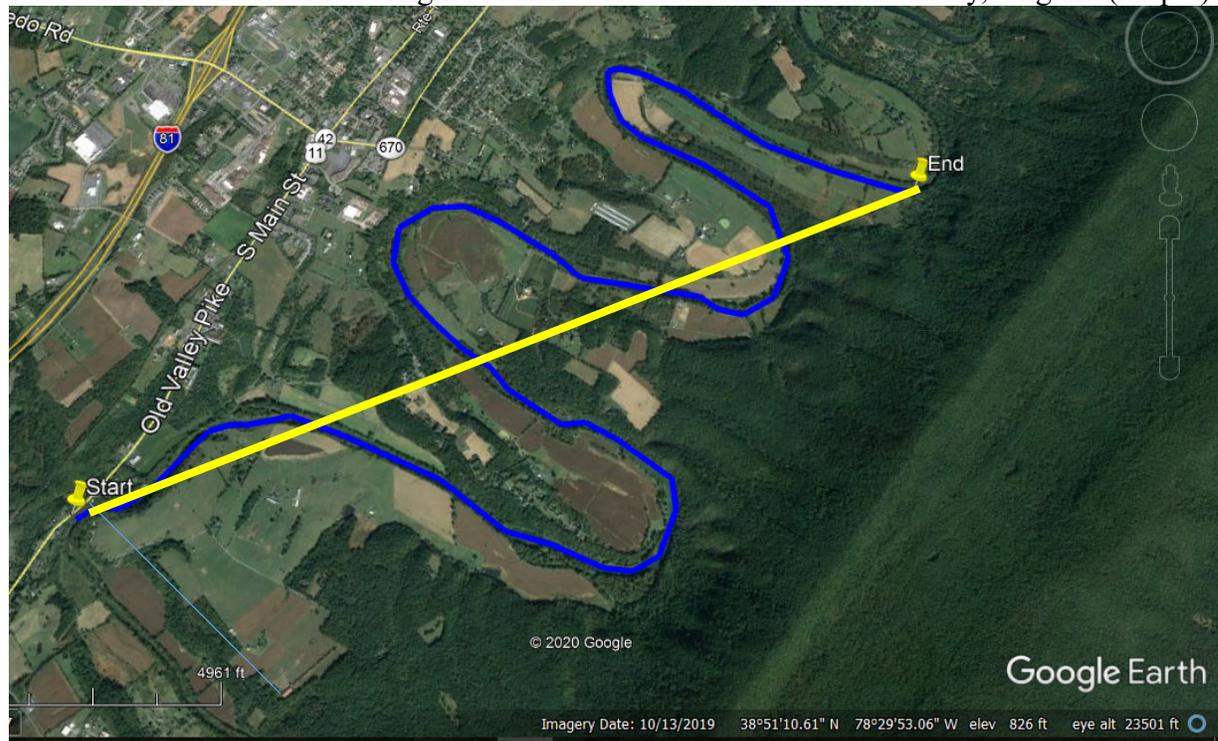
Each evaluation involves data collection from multiple sources. These include state agencies, local and regional planning commissions, map surveys, and related literature reviews. Each evaluation also involves fieldwork. The fieldwork requires canoeing, boating, or walking the stretch of a river and rating the characteristics of the resource as it relates to the criteria. The fieldwork, combined with the data collected, is used to validate existing land use information and rank the river according to relative significant resources, uniqueness and quality.

Once the study has been completed, and DCR has finalized a report with designation recommendations, resolutions and letters of support are solicited from the locality and as many governmental and civic groups and individuals as possible. These letters and resolutions can become part of the official record if a public hearing on the designation recommendation is held.

It is then the responsibility of the locality to garner support of local legislators of the General Assembly for the designation. The legislators introduce the designation legislation and provide support throughout the legislative process. Sample legislation is provided by DCR staff. For proposed legislation, see **Appendix D**.

III. CORRIDOR STUDY MAP

NF of the Shenandoah River originates and ends within Shenandoah County, Virginia (Map 3).



Map 3. The NF of the Shenandoah River was evaluated from Chapman Landing boat ramp to the downstream boundary of Seven Bends State Park. With a straight-line distance of about 3.5 miles (**Yellow**), the river's corridor length is 8.8 miles, represented in **Blue**.

IV. ENVIRONMENTAL ANALYSIS

Personnel from the Friends of the North Fork of the Shenandoah River (FNFSR), DCR's Board of Conservation and Recreation, as well as Planning and Recreation Resources and State Park staff, performed a field evaluation along North Fork of the Shenandoah River on October 7, 2020. The following is a description of the criteria, qualities, and conditions of the resource that make the NF of the Shenandoah River a candidate for the Virginia Scenic River System.

A. River Corridor Vegetation

The evaluation team gave this criterion a moderate score, for having less than 40 percent of its shores with forested buffer of at least 100 feet.

The North Fork of the Shenandoah River winds through a varied landscape of recreational, and residential areas. The 8.8 miles has over half of its shoreline in tree buffers of over 100 feet (Image 1).



Image 1. Narrow buffer along NF of the Shenandoah River.

B. Riverbed and/or River Flow Modifications

The evaluation team gave this criterion a no score, for having an impoundment created by Burnshire Dam that creates a 1.3-mile backwater section within the evaluated 8.8 river miles with a difficult portage around the dam.



Image 2. Burnshire Dam

C. Human Development of Visual Corridor

The evaluation team gave this criterion a moderate score. This criterion is made up of two factors. The first is the amount of City or Town as a percentage of the entire corridor. Secondly is the rural development, which is the number of residencies, idling groupings or industry buildings in the more rural sections of the corridor and is a ratio calculation.

There is no concentrated, or urban development along the corridor. Visible development along the corridor is made up of scattered residential, two industrial sites, agricultural lands, George Washington and Jefferson National Forest, and Seven Bends State Park. There are few sections that do not have some visible development in or just beyond the buffers. (Image 3, 4 and 5).



Image 2 and 3. Examples of homes that are visible from the river.



Image 4. One of the two industrial sites along this section of the river



D. Historic Features

The evaluation team gave this criterion a moderate score for historic sites or structures of significance within 1,000 feet of the river, whether or not the properties are visible from the river.

The following information was provided to DCR by the Department of Historic Resources (DHR) and Shenandoah County. None of the sites are listed sites is on the [National Register of Historic Places](#) (NRHP) under the National Park Service and are on the [Virginia Landmarks Register](#) (VLR), however a couple are eligible.



Image 5. One of the Camp Lupton Cabins that were on the Seven Bends State Park property. Although none of the original camp buildings exist on the site, the site is still considered historic by DHR. Photo By Department of Historic Resources, <https://vcris.dhr.virginia.gov/VCRIS/Mapviewer/>

Examples of specific sites listed along the corridor are:

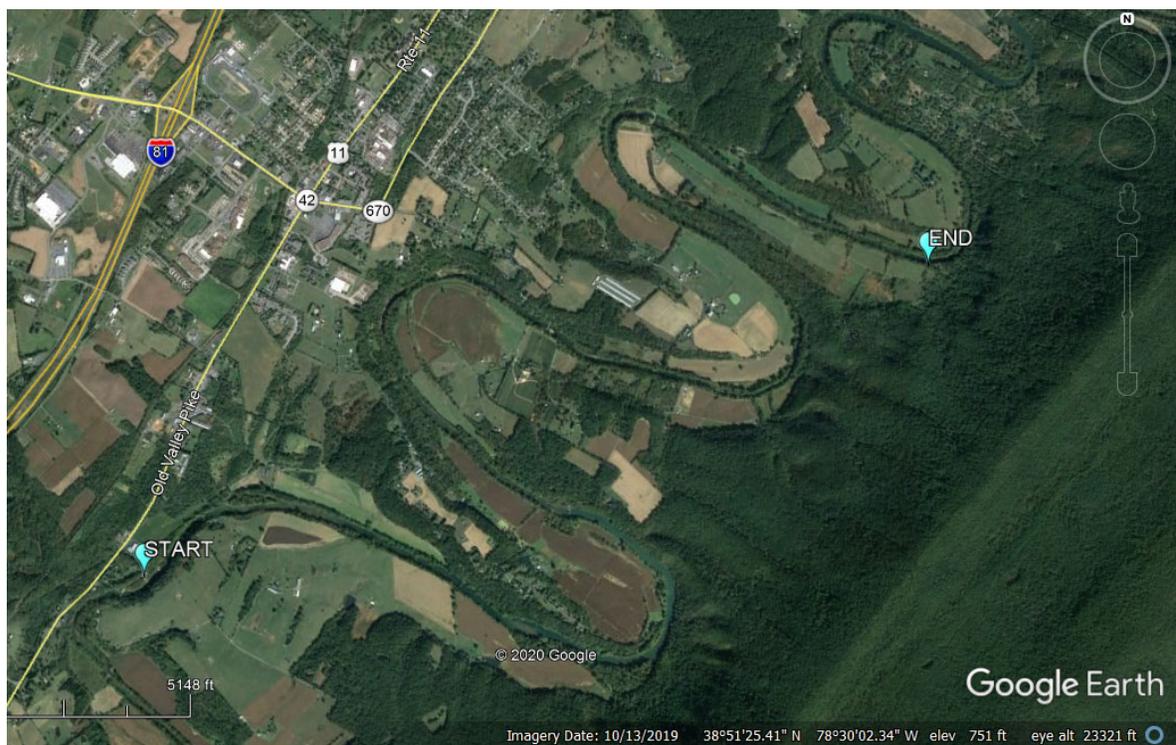
- Former Camp Lupton site. the summer camp for Massanutten Military Academy - eligible
- Stoner House – eligible
- Late Archaic and Woodland Camp or village sites
- Belle Grove & Woodland Camp

E. Landscape

The evaluation team gave this criterion a high score, for having a high diversity of corridor features, like cliffs, rapids, open areas, and closed tree canopies. The view score was given a moderate score due to mostly foreground and mid-ground views.

NF of the Shenandoah River is in Ride and Valley province flowing through the wide Shenandoah Valley. The North Fork of the Shenandoah River flows in a northerly direction meeting the NF of the Shenandoah River and forming the Shenandoah River with a designated section that flows north to a confluence with the Potomac River.

The North Fork of the Shenandoah River is a winding course known as Seven Bends, the 8.8 miles studied runs through a lot of agricultural land with forested steep slopes.



Map 4. NF of the Shenandoah River starting at Chapman Landing boat ramp and ending at the downstream boundary of Seven Bends State Park.

Most of the views are foreground with over hanging trees or fenestrated buffers that allow for more distant views. There are a few longer views that capture the nearby Powell Mountain.



Image 6. Short-range view with fenestration provided by trees and view of mountain beyond on NF of the Shenandoah River.



Image 7. Mid-range view of Powell Mountain on NF of the Shenandoah River.

F. Quality of Fishery

The recommendation for this criterion is a moderate score for with good fishing opportunities.

NF of the Shenandoah River is attractive to wade angling because of its shallow ledges. According to the Department of Wildlife Resources ([DWR](#)), this section has smallmouth bass, sunfish, fallfish, Muskellunge and largemouth bass. Anglers might also encounter American eel, white sucker, northern hogsucker, common carp, crappie, yellow bullhead, and channel catfish.”²



Image 8. Person fishing while wading in the NF of the Shenandoah River. SOURCE: <https://blog.murraysflyshop.com/where-did-the-large-smallmouth-go/>

G. Special Natural Flora and Fauna



The evaluation team gave this criterion a high score.

Members of the guiding team mentioned and saw an abundance of birds, like the eagles, kingfishers, great blue heron, and other birds.. Additionally the team observed piedmont plants like: red cardinal flower, blooming autumn clematis, and early fall color of dogwoods, maples and black gum trees.

Image 8. Central Appalachian Shale Barren

² Website - <https://dwr.virginia.gov/waterbody/shenandoah-river-north-fork/>

Species with Conservation Status

The 8.8 miles of NF of the Shenandoah River has two species and two communities with state-level and national-level conservation status as provided by the DCR Natural Heritage Program. For species ranking definitions (G1, S1, etc.), please see **Appendix B**.

Narrow-leaf blue curls (*Trichostema setaceum*) (G5S2)



An endangered species in Virginia, the Narrow-leaved blue curls is an annual wildflower found in sandy, xeric habitats such as open oak woodlands. As its name implies, narrow-leaved blue curls is also distinguished by its relatively narrower foliage.³ (Image 9 and 10).



Image 9. Narrow-leaf blue curls

Image 10. Narrow-leaf blue curls

Source: https://www.wildflower.org/plants/result.php?id_plant=TRSE5

Source: <http://www.namethatplant.net/plantdetail.shtml?plant=1918>



Ozark milkvetch (*Astragalus distortus* var. *distortus*) (G5,SH)

An uncommon species in Virginia of densely flowering perennial plant in the legume family. With alternate arrangement of low-spreading branching habit no taller than one foot. Its growing habitat is open woods. (Image 11).

Image 11. Ozark milkvetch. Source: <https://commons.wikimedia.org/wiki/>

³ From webpage - <http://hawthornhillwildflowers.blogspot.com/2020/10/narrow-leaved-blue-curls-trichostema.html>

Central Appalachian Shale Barren (Northern Type) (Pinus virginiana - Quercus montana - Quercus rubra/ Avenella flexuosa - Paronychia montana - Packera antennariifolia Woodland) (G3,S3)

This habitat is found in a few places in Virginia. This shale barren woodland occurs on steep unstable shale slopes with areas of exposed bedrock in the central Appalachian Mountains. Most are at less than 400 m elevation, but they can range up to 750 m. Soils are acidic and available moisture is scarce. Large expanses of exposed bedrock are typical. Usually with a woodland or patchy woodland physiognomy, this association may occasionally occur as closed forest or sparse shrubland. The canopy is usually a mixture of oak and conifers but may have either one or the other dominant. Canopy cover varies widely but is typically less than 70% and may be sparse. ⁴ (Image 12)



Image 12. Central Appalachian Shale Barren (Northern Type) Source: <https://www.dcr.virginia.gov/natural-heritage/natural-communities/photos/central-appalachian-shale-barrens/td4-20-072215-sevenbendssp045.jpg>

⁴ From - https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.686629/Pinus_virginiana_-_Juniperus_virginiana_-_Quercus_rubra_-_Solidago_arguta_var_harrisii_-_Opuntia_humifusa_Woodland
Fleming, G.P., K.D. Patterson, and K. Taverna. 2020. The Natural Communities of Virginia: a Classification of Ecological Community Groups and Community Types. Third approximation. Version 3.2. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, VA.
www.dcr.virginia.gov/natural-heritage/natural-communities/ [Accessed: 8-1-2021]

Central Appalachian Calcareous Shale Barren (Juniperus virginiana / Carex pensylvanica - Cheilanthes lanosa - Eriogonum allenii Woodland) G2, S2)

This small-patch barrens community occurs on steep slopes with exposed outcrops of calcareous rocks and underlying bedrock which includes calcareous shales. Soils here are thin supporting a community of mixed and scattered, stunted trees with herbaceous openings. The patchy canopy may ameliorate to some degree the otherwise xeric conditions imposed by exposure and slope. Canopy closure is usually less than 30%, though occasionally higher, and tends to be patchy, with herbaceous openings. Shrubs are sparse and the diverse herbaceous layer forms 25-90% ground cover, except where broken by rock outcrops (about 50%).⁵



Image 13. Central Appalachian Calcareous Shale Barren. Source: <https://www.dcr.virginia.gov/natural-heritage/natural-communities/photos/central-appalachian-shale-barrens/td4-20-072215-sevenbendssp045.jpg>

H. Water Quality

The evaluation team gave this criterion a high score, for having virtually no visible pollution, and waters that are not turbid or muddy during less than one-third of the six warm season months (May through October). There was little trash along the entire section of the river. This river section receive additional bonus points because it is rated highly by the [Healthy Waters Program](#).

⁵ Source: <https://www.dcr.virginia.gov/natural-heritage/document/comlist04-17.pdf> . Fleming, Gary P. and Karen D. Patterson 2017. Natural Communities of Virginia: Ecological Groups and Community Types: a listing with conservation status ranks. Natural Heritage Technical Report 17-07. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, Virginia. 36 pages.

I. Parallel Roads

The evaluation team gave this criterion a high score, for having virtually no parallel roads that impact river and its users.

J. Crossings

The evaluation team gave this criterion no score, due to the large number and impact of crossings along this stretch of the river.

Crossings are considered roads, pipelines and power/communication lines that pass over, under or through a river. The total impact is quantified as a ratio per river mile.

This section of the NF of the Shenandoah River has three bridge crossings, including two low-water bridges. Additionally, there are three transmission lines that cross the river.



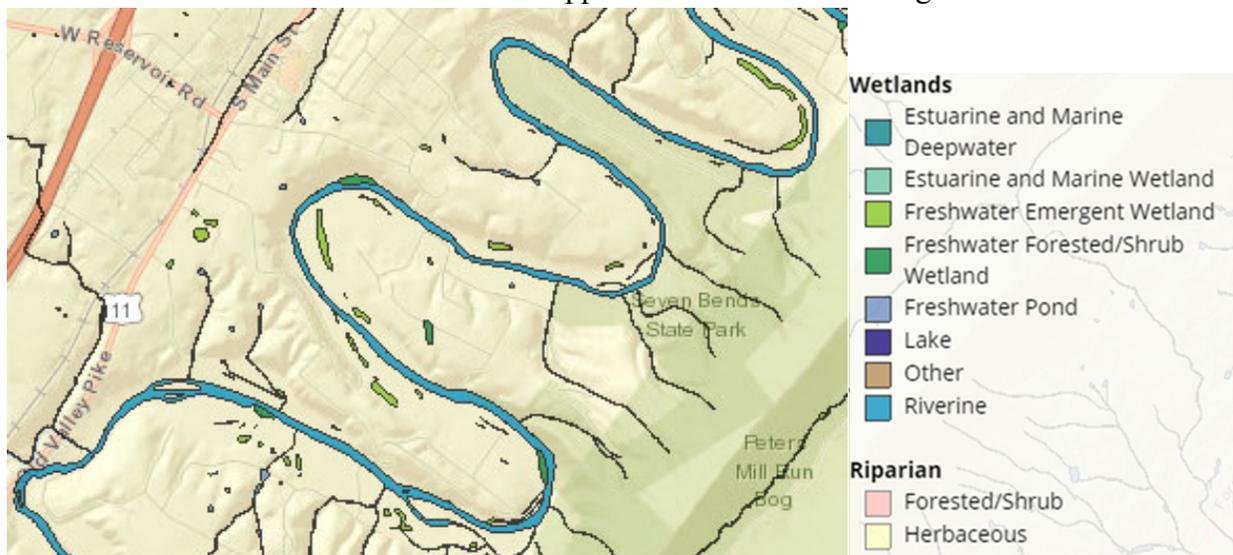
Figure 14. Laurel Hill Lane, Route 671

K. Special Features Affecting River Aesthetics

The evaluation team gave this criterion a high score for overall aesthetic appeal.

Throughout most of the section length has unique and interesting in-stream rock formations. There are also cultural sites like the Camp Lupton on the Seven Bends State Park and the swinging bridges that allow access to eastern side of the river for farms, businesses and residences that due to periodic flooding are cutoff from the Town of Woodstock.

The views along NF of the Shenandoah River were short-range and mid-range, including views of Powel Mountain that runs parallel along the entire section on the southeast. Along the way, islands, riffles and a few wetlands provided interest to the river course. Bluffs and cliffs accent the river bends and mature forests, which add interest and highlight the storied Seven-Bends area. The fall color made up of hardwoods and second growth forests reflected in the flatwater sections added additional interest. Despite the number of residences and agricultural lands, the corridor seems remote and isolated as one approaches the bluff towering above.



Map 5. Wetlands along NF of the Shenandoah River. There are few wetlands along this section of the NF of the Shenandoah Rive. However, the existing wetlands are “Freshwater Forested/Shrub Wetland” (dark green) and a few sections of “Freshwater Emergent Wetland” (light green) Source: National Wetlands Inventory <https://www.fws.gov/wetlands/data/mapper.html>

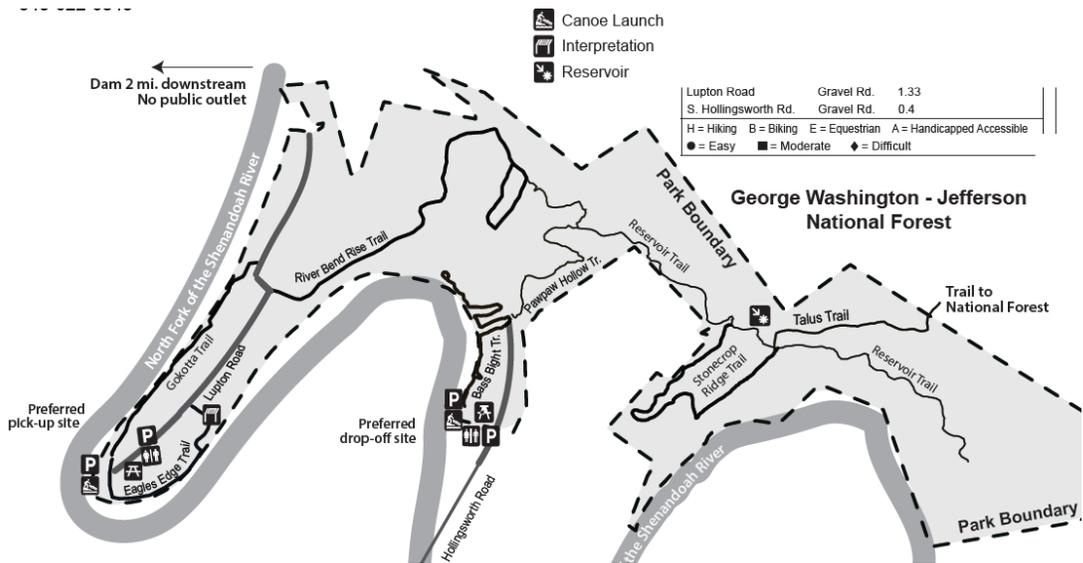
L. Public Recreational Access

The evaluation team gave this criterion a high score for having a public boat/canoe/kayak launch sites along the corridor.

NF of the Shenandoah River is a popular recreational site for boating, fishing, and tubing. The public can access the river at several locations; including Chapman Landing and two launches at Seven Bends State Park. (Map 6) Additionally, this section of the river is a potential Water Trail that is under development.



Image 13. Seven Bends boat access



Map 6. Seven Bends State Park map with boat accesses. Source: <https://www.dcr.virginia.gov/state-parks/document/data/trail-guide-sevenbends.pdf>

L. Land Conservation

The evaluation team gave this criterion the full score, for having more than 25 percent of the corridor protected through easement or other permanent measure. The State owned park, Seven Bends, and the federally owned George Washington and Jefferson National Forest are the primary conserved lands along the corridor totaling, about 26% of the entire corridor.

DCR's Natural Heritage Program provides information about managed lands and conservation easements. (Map 7)



Map 7. Land conservation along NF of the Shenandoah River. The light green areas are owned by the Commonwealth of Virginia as Seven Bends State Park. The darker green overlay is George Washington and Jefferson National Forest. The striped purple area is a National Forest Conservation Land - Peters Mill Run Bog. Source: Natural Heritage Data Explorer - <https://vanhde.org/content/map>

V. LAND USE AND OWNERSHIP

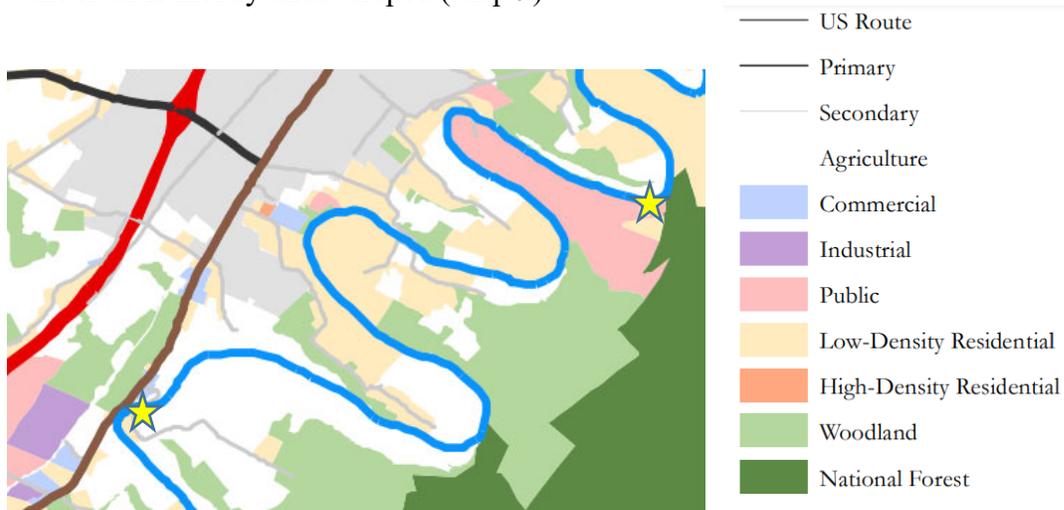
Existing land use in Shenandoah County is reflected in the developed county plans which support the protection and increased quality of the NF of the Shenandoah River and maintain its culturally rural character. The most recent Comprehensive Plan of 2019⁶ acknowledges the importance of maintaining the health of the County's natural assets, including the North Fork of the Shenandoah River. The vision for the future of the county includes:

- Protecting natural resources
- Ensuring open agricultural lands
- Preservation of the natural and historical character of the County.

This includes protection, promoting and balancing the existing qualities as well as those necessary for growth. Growth.

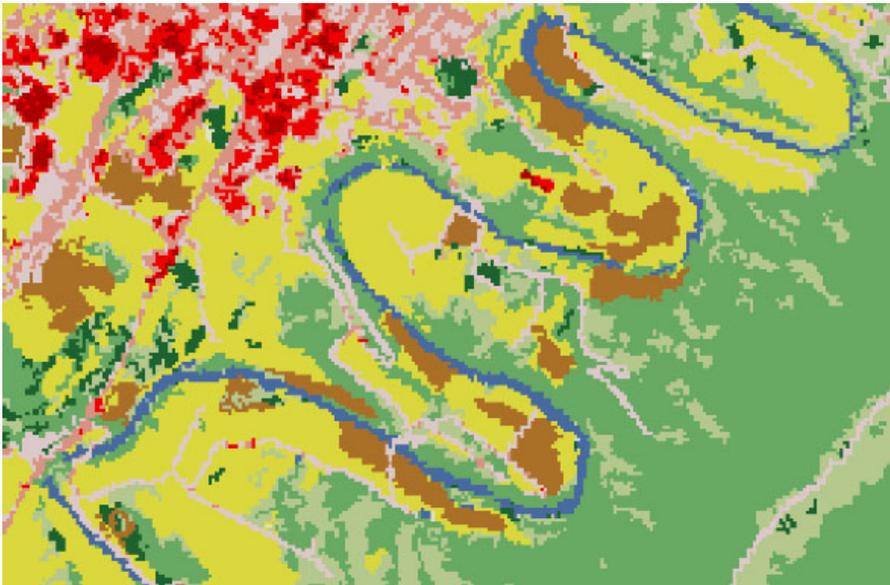
There is a realization that the river is one of the County's important amenities. The citizens and the local government place a large value on their river and its recognition will support their goals for the future and insure the protection of the scenic assets of the NF of the Shenandoah River.

About 26% of the lands along the study corridor are in public ownership, as discussed in the Land Conservation Section. Land use along the river corridor, as supported by the Comprehensive Plan, is primarily agriculture and public lands. (Map 8) The land cover around the river is mostly undeveloped (Map 9).



Map 8. Land use along the evaluated section of the NF of the Shenandoah River. Most of the section is surrounded by National Forest (**dark green**) & Woodland (**light green**), and Agricultural (**white**). Source: <https://shenandoahcountyva.us/planning/wp-content/uploads/sites/35/2019/08/Chapter-3-Update.pdf>

⁶ <https://shenandoahcountyva.us/planning/wp-content/uploads/sites/35/2019/08/2025-Comprehensive-Plan-Updated-2019.pdf>



- Open Water (11)
- Perennial Ice/Snow/ (12)
- Developed, Open Space (21)
- Developed, Low Intensity (22)
- Developed, Medium Intensity (23)
- Developed, High Intensity (24)
- Barren Land (Rock/Sand/Clay) (31)
- Unconsolidated Shore (32)
- Deciduous Forest (41)
- Evergreen Forest (42)
- Mixed Forest (43)
- Shrub/Scrub (52)
- Grasslands/Herbaceous (71)
- Sedge/Herbaceous(AK only) (72)
- Lichens (Ak only) (73)
- Moss (AK only) (74)
- Pasture/Hay (81)
- Cultivated Crops (82)
- Woody Wetlands (90)
- Emergent Herbaceous Wetlands (95)

Map 9. Land cover for the corridor consists of agricultural and forest lands. Source: <https://www.mrlc.gov/viewer/>

VI. CONCLUSIONS AND RECOMMENDATIONS

The Virginia Department of Conservation and Recreation (DCR) concludes that NF of the Shenandoah River in Shenandoah County, near the Town of Woodstock, from Chapman Landing boat ramp to the downstream boundary of Seven Bends State Park, a distance of approximately 8.8 miles, is hereby eligible to be a component of the Virginia Scenic River System. Scenic River designation is warranted because of the aesthetic and recreational qualities of the river section, its environs, the unique flora and fauna, and the protected lands.

Flowing through Shenandoah County, this river segment has a remote feel and several access opportunities for river use, as well as a number of interesting aesthetic features including islands, riffles and views of Powell Mountain.

NF of the Shenandoah River is home to bald eagles and other river oriented birds. The river also has two plant species and two unique forest types of state or national level conservation status.

NF of the Shenandoah River is rich with historical sites along the river corridor that are eligible for Virginia and National Landmark Register recognition.

The river is also a popular site for recreational activities such as boating, fishing, and tubing. Public provided by the Department of Wildlife Resources at Chapman Landing and Seven Bends State Park with two sites. These accesses provide opportunities for floats of varying lengths. Additionally, a NF of the Shenandoah River Water Trail is under development. The designation will support and help with the promotion of this endeavor.

Considering the aspects of NF of the Shenandoah River as described in this report, DCR recommends that:

1. The section that starts at Chapman Landing boat ramp to the downstream boundary of Seven Bends State Park, a distance of approximately 8.8 miles, receive Virginia Scenic River designation, and
2. The Department of Conservation and Recreation be appointed the Administering Agency.

Proposed legislation for Scenic River designation is provided in **Appendix D**.

VII. CONSERVATION PLAN

The following recommended conservation plan involves local and state governments, individual and riparian landowners, and local stewardship initiatives.

A. Virginia Scenic River Designation

Designation of NF of the Shenandoah River would give riparian landowners, local citizens, and local governments a greater voice in the planning and implementation of federal and state projects that might affect the river. For other benefits of Scenic River designation, see **Section B: Benefits of Designation**.

The local government may create a local scenic river advisory committee to advise the local government on the protection or management of the scenic river segment within its jurisdiction. For more information about this process, see [Code of Virginia § 10.1-401](#) and [§ 10.1-406.1](#).

B. Land Use Plans

Shenandoah County will continue to enact its land use and comprehensive plans, to support, recognize, and plan for the betterment of the North Fork of the Shenandoah River, which plays a strong role in the county's quality of life. Such plans can help protect the river and its environs from detrimental development and insure that the development that does occur uses low impact strategies. Additional support for access, improved water quality and recreational use of the river are found in the [Master Plan For The North Fork Of The Shenandoah River](#) (2019) by the University of Virginia and the [Shenandoah County Indoor/Outdoor Recreation Plan](#) (2000).

C. Local and Riparian Landowners

Stewardship by local and riparian landowners, especially with so much of it in public hands, has been increasing over the recent years. Through continuation of these efforts, the natural and scenic character of the river can be protected. Increasing buffers and runoff minimization techniques will go far towards insuring the assets of the North Fork of the Shenandoah River are maintained and enhanced.

D. Local Stewardship Initiatives

There are many citizens who support the conservation and recognition of North Fork of the Shenandoah River. Most of them work with the [Friends of the North Fork of the Shenandoah River](#) (FNSR)⁷ by helping with river clean ups and water monitoring. The FNSR is active in education, science, community action and advocacy as it relates to the North Fork of the Shenandoah River. Made up of four other organizations, another strong river supporter is [The Alliance for the Shenandoah Valley](#), which is interested in the health of the river and preserving the agricultural culture of the valley.

VIII. ANTICIPATED COST OF DESIGNATION

The only anticipated direct costs as a result of the designation would be those incurred by DCR as a result of its duties as administrator of the river. These costs are estimated to be approximately \$1,000 per year.

IX. AGENCY COMMENTS/ RESOLUTIONS

A draft report was circulated in 2020 among DCR Divisions, other state agencies, and Woodstock. See comments and resolutions of support in **Appendix C**.

⁷ FNFSR website - <https://fnfsr.org/>

X. APPENDIX

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Appendix A. Acronyms and Abbreviations

The Act	Scenic Rivers Act, Title 10.1, Chapter 4 of the <i>Code of Virginia</i>
BOS	Board of Supervisors
DCR	Virginia Department of Conservation and Recreation
DGIF	Virginia Department of Game and Inland Fisheries
NRHP	National Register of Historic Places under the National Park Service
SR	State Route
USGS	U.S. Geological Survey
VA	Commonwealth of Virginia
VDOT	Virginia Department of Transportation
VLR	Virginia Landmarks Register
VOF	Virginia Outdoors Foundation

Appendix B. Species Ranking Definitions of DCR Natural Heritage

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
Villosa perpurpurea	Purple Bean	G1	S1	LE	LE

Definitions of Abbreviations used on Natural Heritage Resource Lists

The following ranks are used by DCR to set protection priorities for natural heritage resources. Natural Heritage Resources, or "NHR's," are rare plant and animal species, rare and exemplary natural communities, and significant geologic features. The criterion for ranking NHR's is the number of populations or occurrences, i.e. the number of known distinct localities; the number of individuals in existence at each locality or, if a highly mobile organism (e.g., sea turtles, many birds, and butterflies), the total number of individuals; the quality of the occurrences, the number of protected occurrences; and threats.

- S1** Critically imperiled in the state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically 5 or fewer populations or occurrences; or very few remaining individuals (<1000).
- S2** Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. Typically 6 to 20 populations or occurrences or few remaining individuals (1,000 to 3,000).
- S3** Vulnerable in the state either because rare and uncommon, or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically 21 to 100 populations or occurrences (1,000 to 3,000).
- S4** Apparently secure; Uncommon but not rare, and usually widespread in the state. Possible cause of long-term concern. Usually >100 populations or occurrences and more than 10,000 individuals.
- S5** Secure; Common, widespread and abundant in the state. Essentially ineradicable under present conditions. Typically with considerably more than 100 populations or occurrences and more than 10,000 individuals.
- S#B** Breeding status of an animal within the state
- S#N** Non-breeding status of animal within the state. Usually applied to winter resident species.
- S#?** Inexact or uncertain numeric rank.
- SH** Possibly extirpated (Historical). Historically known from the state, but not verified for an extended period, usually > 15 years; this rank is used primarily when inventory has been attempted recently.
- S#S#** Range rank; A numeric range rank, (e.g. S2S3) is used to indicate the range of uncertainty about the exact status of the element. Ranges cannot skip more than one rank.
- SU** Unrankable; Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
- SNR** Unranked; state rank not yet assessed.
- SX** Presumed extirpated from the state. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
- SNA** A conservation status rank is not applicable because the element is not a suitable target for conservation activities

Global Ranks are similar, but refer to a species' rarity throughout its total range. Global ranks are denoted with a "G" followed by a character. Note GX means the element is presumed extinct throughout its range, not relocated despite intensive searches of historical sites/appropriate habitat, and virtually no likelihood that it will be rediscovered. A "Q" in a rank indicates that a taxonomic question concerning that species exists. Ranks for subspecies are denoted with a "T". The global and state ranks combined (e.g. G2/S1) give an instant grasp of a species' known rarity.

These ranks should not be interpreted as legal designations.

- G1** Extremely rare and critically imperiled with 5 or fewer occurrences or very few remaining individuals; or because of some factor(s) making it especially vulnerable to extinction.
- G2** Very rare and imperiled with 6 to 20 occurrences or few remaining individuals; or because of some factor(s) making it vulnerable to extinction.
- G3** Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range; or vulnerable to extinction because of other factors. Usually fewer than 100 occurrences are documented.
- G4** Common and apparently secure globally, although it may be rare in parts of its range, especially at the periphery.
- G5** Very common and demonstrably secure globally, although it may be rare in parts of its range, especially at the periphery.
- GH** Formerly part of the world's fauna with some expectation that it may be rediscovered; generally applies to species that have not been verified for an extended period (usually >15 years) and for which some inventory has been attempted recently.
- GX** Believed to be extinct throughout its range with virtually no likelihood of rediscovery.
- GU** Possibly rare, but status uncertain and more data needed.
- G?** Unranked, or, if following a numerical ranking, rank uncertain (e.g., G3?).
- G_G_** The rank is uncertain, but considered to be within the indicated range (e.g., G2G4) of ranks (also, T_T_).
- G_Q** Taxon has a questionable taxonomic assignment (e.g., G3Q) and may prove to be invalid upon further study.
- G_T_** Signifies the rank of a subspecies (e.g., G5T1 would apply to a subspecies if the species is demonstrably secure globally (G5) but the subspecies warrants a rank of T1, critically imperiled.)

FEDERAL STATUS

The Division of Natural Heritage uses the standard abbreviations for Federal endangerment developed by the U.S. Fish and Wildlife Service, Division of Endangered Species and Habitat Conservation.

- LE** Listed Endangered
- LT** Listed Threatened
- PE** Proposed Endangered
- PT** Proposed Threatened
- C** Candidate (formerly C1 - Candidate category 1)
- E(S/A)** Treat as endangered because of similarity of appearance
- T(S/A)** Treat as threatened because of similarity of appearance
- SOC** Species of Concern species that merit special concern (not a regulatory category)

STATE LEGAL STATUS

The Division of Natural Heritage uses similar abbreviations for State endangerment:

LE	Listed Endangered
PE	Proposed Endangered
SC	Special Concern - animals that merit special concern according to VDGIF (not a regulatory category)
LT	Listed Threatened
PT	Proposed Threatened
C	Candidate

For information on the laws pertaining to threatened or endangered species, please contact:

- U.S. Fish and Wildlife Service for all FEDERALLY listed species;
- Department of Agriculture and Consumer Services, Plant Protection Bureau for STATE listed plants and insects; and
- Department of Game and Inland Fisheries for all other STATE listed animals

CONSERVATION SITES RANKING

Rank is a rating of the significance of the conservation site based on presence and number of natural heritage resources; on a scale of 1-5, 1 being most significant. Sites are also coded to reflect the presence/absence of federally/state listed species:

Conservation Site Ranks

B1	Outstanding significance
B2	Very High significance
B3	High significance
B4	Moderate significance
B5	Of general Biodiversity significance

Legal Status of Sites

FL	Federally listed species present
SL	State listed species present
NL	No listed species present

Appendix C. Letters, Comments, and Other Support

1. Letter Requesting Designation

County of Shenandoah

BOARD OF SUPERVISORS

DISTRICT 1 – DICK NEESE
DISTRICT 2 – STEVE BAKER
DISTRICT 3 – RICHARD WALKER
DISTRICT 4 – KARI BOULSTON
DISTRICT 5 – DENNIS MORRIS
DISTRICT 6 – CONTRAD HELSLEY

600 N. Main Street, Ste 102
WOODSTOCK, VA 22664



Tel: 540.459.6165 Fax: 540.459.6168
www.shenandoahcountypva.us

OFFICE OF COUNTY ADMINISTRATION

EVAN L. VASS
COUNTY ADMINISTRATOR
MANDY R. BEATSA
ASSISTANT COUNTY ADMINISTRATOR

September 25, 2019

Lynn Crump, PLA, ASLA, Scenic Resources Coordinator,
DCR- Planning & Recreation Resources
600 East Main Street, 24th Floor, Richmond, VA 23219

RE: Shenandoah River North Fork Scenic River Designation

Dear Ms. Crump,

At their regular September 24, 2019 meeting, the Shenandoah County Board of Supervisors received a presentation on the potential for designation of an 8.8 mile stretch of the North Fork of the Shenandoah River from Chapman's Landing through Seven Bends State Park as a Virginia Scenic River. The Board subsequently directed me to proceed with a request to the Department of Conservation and Recreation to conduct an eligibility study.

Please let me know when you would like to schedule an on-site assessment and we will be happy to facilitate.

Sincerely,

A handwritten signature in black ink, appearing to read "Evan L. Vass".

Evan L. Vass
County Administrator

Cc: Ms. Jenna French, Shenandoah County Tourism & Economic Development Director
Thomas Stevens, Chief Ranger, Seven Bends State Park
David Brotman, Executive Director, Friends of the North Fork of the Shenandoah River

2. DCR Designation Support

At the December 2020 Board of Conservation and Recreation meeting, the Board voted unanimously to support the designation of the NF of the Shenandoah River in Woodstock as a Virginia Scenic River.

3. Agency Comments



COMMONWEALTH of VIRGINIA

Marine Resources Commission
180 Pavick Road
Bldg 98
Fort Monroe, VA 23651-1064

Matthew J. Bricker
Secretary of Natural Resources

David G. Bowman
Commissioner

December 23, 2020

Department of Conservation and Recreation
Attn: Lynn Crump
600 East Main Street, 24th Floor
Richmond, Virginia 23219

Re: Proposed Scenic River Designation of Segments of the
South, North Fork of the Shenandoah, Middle James
extension and extension of the Rappahannock River

Dear Ms. Crump,

In accordance with your memorandum dated December 8, 2020, we have reviewed the documentation concerning the proposed Scenic River designation of segments of the South River in Waynesboro, North Fork of the Shenandoah in Shenandoah County, Middle James extension from Allens Creek to Warren and New Canton to Columbia, and extension of the Rappahannock River in the City of Fredericksburg, the counties of Spotsylvania, Essex, Westmoreland, King George, Stafford, Richmond, and Caroline, and the towns of Port Royal and Tappahannock.

The Virginia Marine Resources Commission (VMRC) is responsible for managing the commercial and recreational tidal fisheries and for issuing permits for encroachments in, on, or over State-owned submerged lands throughout the Commonwealth. The VMRC has no position on the proposed Scenic River designations provided such designations do not adversely affect our management of the commercial and recreational fisheries and the submerged lands on which those resources depend.

If you have any questions please contact me at 757-247-2251 or by email at randy.owen@virc.virginia.gov. Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to be "Randy Owen".

Randy Owen
Deputy Chief, Habitat Management Division

RDO/tib
HM

An Agency of the Natural Resources Secretariat
www.dcr.virginia.gov

Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD

Based on information provided here by the Department of Environmental Quality (DEQ), the General Assembly designation of the North Fork of the Shenandoah River as a Scenic River will not impact existing State Water Control Board programs. Therefore, DEQ, acting on behalf of the Board, has no comment on the proposed designations. **Department of Environmental Quality 1/18/2021**

The North Fork of the Shenandoah River in Shenandoah County from Chapman's Landing to the downstream property line of Seven Bends State Park is a designated Threatened and Endangered Species Water due to the presence of state Endangered Brook Floaters, state Threatened Wood Turtles, and state Threatened Green Floaters. **Department of Wildlife Resources – January 15, 2021**

4. Resolution of Support

The Shenandoah County Board of Supervisors passed a resolution supporting the designation of the North Fork of the Shenandoah River on February 9, 2021.

County of Shenandoah

BOARD OF SUPERVISORS

DISTRICT 1 – JOSH STEPHENS
DISTRICT 2 – STEVE BAKER
DISTRICT 3 – BRAD POLLACK
DISTRICT 4 – KARE ROULSTON
DISTRICT 5 – DENNIS MORRIS
DISTRICT 6 – TIM TAYLOR

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OFFICE OF COUNTY ADMINISTRATION

EVAN L. VASS
COUNTY ADMINISTRATOR
MANDY R. BELTZA
DEPUTY COUNTY ADMINISTRATOR

RESOLUTION TO REQUEST A PORTION OF THE NORTH FORK OF THE SHENANDOAH RIVER BE DESIGNATED AS A SCENIC RIVER

WHEREAS, The Virginia Scenic Rivers Program was enacted by the Virginia General Assembly in 1970 for the purpose of identification and preservation of certain rivers, or sections of rivers, which possess high quality natural beauty;

WHEREAS, the Virginia Department of Conservation and Recreation (DCR) has been charged with administering the Scenic Rivers Program and developing an objective evaluation process to judge the suitability of river segments;

WHEREAS, staff from the Virginia Department of Conservation and Recreation visited the North Fork of the Shenandoah River and evaluated its eligibility for Scenic River Designation;

WHEREAS, the Virginia Department of Conservation and Recreation completed its evaluation and determined that the portion of the Shenandoah River under review in Shenandoah County was found to qualify as a Virginia Scenic River;

WHEREAS, the Virginia Board of Conservation and Recreation supports the endorsement for designation as a Scenic River of a portion of the Shenandoah River.

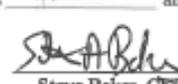
NOW, THEREFORE, BE IT RESOLVED BY THE SHENANDOAH COUNTY BOARD OF SUPERVISORS:

1. Does hereby support the designation of the portion of the Shenandoah River which flows through Shenandoah County from Chapman's Landing Road through Seven Bends State Park and does hereby request that our General Assembly representatives serve as patrons for the legislation that will codify the Scenic River designation.

Adopted on a Motion and Second by Supervisors Taylor and MORRIS and by a roll call vote of 6-0 on February 9, 2021.

ATTEST:


Evan L. Vass, Clerk to the Board


Steve Baker, Chairman

Appendix D. Proposed Legislation for the *Code of Virginia*

§ 10.1-417.1 North Fork of the Shenandoah State Scenic River.

The North Fork of the Shenandoah River in Shenandoah County from Chapman Landing through Seven Bends State Park, a distance of approximately 8.8 miles, is hereby designated as the Shenandoah State Scenic River, a component of the Virginia Scenic Rivers System.

Appendix E. Evaluation Criteria

The Code of Virginia defines ‘Scenic Rivers’ [10.1-400] as those rivers that have “... superior natural and scenic beauty, fish and wildlife, and historic, recreational, geologic, cultural and other aesthetics.” If a stream meets the minimum criteria necessary for a field study, it is fully evaluated and ranked according to relative uniqueness or quality. Minimum river segment criteria is defined as being a minimum of five (5) miles in length, having definable termini, and being accessible for evaluation.

Each river, or river segment, is evaluated and rated on fourteen different factors from which a cumulative score is derived. This score must meet a minimum rating score to be designated. Each factor was selected because of its ability to enhance the scenic experience and its contribution the overall quality of the resource.

Factors and description:

1. Stream Corridor Vegetation

Research has shown that the wider the undisturbed riverbank buffers the more dramatically the reduction in pollution run-off, which protects water quality. Tree canopies that shade the water and reduce water temperatures creating healthy habitats for fish and wildlife, these environments enhance the score for river sections. Agricultural lands and clear-cut forests are one of the greatest contributors of siltation, erosion and river pollution. Consequently, the farther back from the river’s edge the less impact these will have on any given river. These two significant attributes, wide buffers and tree canopies, naturally forested river banks are significantly weighted criteria.

2. Streambed and/or stream flow modifications

It is the intention of the Scenic River Program to keep designated rivers in a native/ natural state. To this end, *significant channelization, or* impoundments of any kind negatively impact the scenic quality of the river. In some cases designated sections end at a significant impoundment, in order to preserve the quality of the designated river section.

3. Human development of visual corridor

- A. City or Town Related
- B. Rural Development

Much of human development is in random and poorly thought out patterns, which have a negative effect on the scenic viewshed from rivers. Each survey is conducted when foliage is in full leaf, when the total visual impact of unsightly development is diminished and recreationalists are using the river. Development impacts on the river are scored in two parts. The first focuses on development related to the concentration of buildings in the more urban areas, as they are observed from the river. The second is for those more rural areas, where single residences or groupings are seen as separate individual units or clusters. [NOTE- a cluster is defined as up to five dwelling or other structures located immediately adjacent to one another.] Higher scores are a result of having no urban development and no visible buildings.

4. Historic Features

Rivers throughout Virginia were the primary transportation corridors from early on in the history of this country. Accordingly, consideration of the historical aspects of the river is critical. Historic features and sites are recognized in the original legislation. Bonus points are given for visible historic sites that are on state or national historic lists within 1000 feet of the river. Note these are not eligible sites, but ones

already designated.

5. Landscape
 - A. Diversity
 - B. Views

When the term 'scenic' is used, it is most frequently applied to the natural environment or landscape. Here two specific scenic attributes, diversity and views, are identified and considered for scoring along the proposed river section. As supported by research, the first attribute, diversity, shows that the more diverse the visual landscape, the more appealing it is to the observer. Longer and grander views are also considered a scenic quality as seen from the river corridor, making the corridor itself more appealing.

6. Quality of Fishery

Fish and wildlife assets along a scenic river are important because of their intrinsic and recreational value. The quality of fish in a river corridor is based on the abundance of recreational varieties, the number of varieties, the uniqueness of the varieties of the fish population, and the opportunities along the river for legal fishing.

7. Additional Natural Features

This section refers to the wildlife and plants along the corridor. Data from the Natural Heritage Data is used to identify species of statewide or greater significance that are present along the corridor. Additional points can be received for the presence of plant and animal species natural features within 1000 feet of the river.

8. Water Quality

Water Quality is generally considered to be related to the chemical or other pollution levels. Since most of the rivers in the state are already under observation for chemical and biological impacts, for the purposes of this evaluation, the appearance of the water and its banks is more significant. The evaluation is based on the visible turbidity or siltation and the amount of litter in and adjacent to the river corridor.

NOTE: there is an extra bonus of a maximum of 10 points if the section is a healthy or high quality waters section.

9. Parallel Roads

Part of the designation of scenic rivers is to look at the perceived remoteness of the river corridor, as studied when trees are in full leaf. Since many of Virginia's rivers were major transportation routes, roads often followed the river routes. Consequently, many miles of riverbanks hold parallel roads and railroads. The more industrial a corridor, the less likely it is to become a Scenic River. How visible the roads are is key to a high rating for the Parallel Roads criteria.

10. Crossings

Many developed river corridors have bridges throughout the river extent to accommodate easier road or railroad construction. Historic bridges or bridges at the beginning or end of the proposed river segment are not counted in the scoring. Crossings refer to roads, railroads, telephone lines, powerlines, and any other man-made structure that crossed over the river. Pipelines and other crossings that go under the riverbed, and are not seen from the river, are not counted in the scoring. NOTE: Residential wire crossings do not count.

11. Special Features Affecting the Aesthetics

Unique or interesting in-stream rock formations

Culturally significant sites (mills, covered bridges, navigation structures, etc.)

Islands

Rapids

Waterfalls or cascades

Primitive areas (e.g. swamps, mature forests, etc.)

Bluffs, cliff, rock outcrops

Special geological features

Remoteness or isolation

The purpose of this category is to list all the stream and corridor features, which singly or in combination make the river resource visually attractive. The reviewer(s) can check as many of the special features as appropriate. A brief explanation of the identified features is required.

12. Overall Aesthetic Appeal

An overall Aesthetic Appeal rating considers all of the special features and then a score is applied based on a low to exceptional ranking. Exceptional ranking is one where there are many features, a lot of diversity and extreme or dramatic contrasts and features.

13. Public Recreational Access

Public Boat/Canoe/ Kayak Launch or public use trail along corridor

Informal Public Launch Site; e.g., bridge crossing, adjacent road

Private access site available to public

No public access

Having public access for field investigations, especially, is beneficial to the consideration of an asset that will benefit the Commonwealth. The access opportunities listed above are rated depending on the amount of public access associated with each one. During the evaluation, the reviewers will also record specific types of water-based recreation that occur on segment under evaluation, such as boating, fishing, swimming, tubing, and body surfing.

14. Significant Permanent Protection

With the increase in attention to land conservation and the fact that many of the conservation easements look to see if properties are adjacent to designated scenic rivers, the Scenic River Advisory Board added special recognition for significant permanent protection of 25% or more land adjacent to evaluated segment; i.e., conservation easement, protected public land, or other permanent protection.