

APPENDIX A

RUSSELL AND WISE COUNTY PARCELS DESKTOP REVIEW



July 6, 2021

Mr. Bob Polino
Austin Brockenbrough and Associates, LLC
1011 Boulder Springs Drive
Suite 200
Richmond, Virginia 23225

ECS Project No. 47:11947

Reference: Environmental Desktop Review Summary Letter, Clinch River Project – Russell County Parcels, Artrip Road, Russell County, Virginia

Dear Mr. Polino:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Austin Brockenbrough and Associates (ABA) with the results of the Environmental Desktop Review for the above-referenced project site. Our services were provided in general accordance with ECS Proposal No. 47:18022-RP, dated March 23, 2021.

PROPERTY DESCRIPTION

The study area is located along Artrip Road in Russell County, Virginia. A majority of the subject property is an open farm field with forested areas located through the outer limits of the subject site. For the purpose of this report, the Russell County parcels have been separated into 2 sites due to their distances from one another. The first property is referred as the *Owens and TNC Parcels* which contain Parcel IDs 106L-1040A, 115R-1056C, 1056B, 1056D, and 114R-1043B and is approximately 231 acres in size. The second property is referred as the *McIntyre Parcel* which is Parcel ID 115R-1243 and approximately 10 acres in size. These project sites were separated as the desktop reviews would not allow reports to be generated concurrently with both properties given their distance apart from each other.

DATABASE REVIEW FINDINGS

Section 1.0 – Cultural Resources

1.1 Cultural Resources Desktop Review

1.1.1 Virginia Department of Historic Resources (DHR):

ECS reviewed DHR files for historic sites on the Virginia Cultural Resources Information System (VCRIS), other recorded historic sites, and documented archaeological sites. According to the database, the following resources were mapped on or around the subject site limits:

1.1.1.1 Owens and TNC Parcels

1. David Musick House (DHR ID: 083-5258) – this feature is mapped to the north of the subject site. The feature is associated with a residential dwelling that is noted to still be present and in good condition. The resource has not been evaluated by DHR.

2. Artrip Baptist Church (DHR ID: 083-5259) - this feature is mapped to the north of the subject site. The feature is associated with a Baptist Church that is still an existing and operating Church. The resource has not been evaluated by DHR.

1.1.1.2 McIntyre Parcels

DHR's website does not map archaeological and/or architectural resources on or surrounding the subject site. There are some cemeteries depicted to the northeast of the site, but they do not appear to be located on the subject site and are located beyond the Clinch River.

1.2 Cultural Resources Site Reconnaissance

1.2.1 Subject Site Structures

1.2.1.1 Owens and TNC Parcels

Three structures that appeared to be associated with the historical agricultural use of the site were observed in the western portion of the property. The structures appeared to be used as a barn/shed, a cabin, and an old log barn. The Breeding Cemetery is in east-central portion of the subject site. The buildings appeared to be more than 55 years old; however, at the time of this summary report, Russell County did not have any online real estate information pertaining to any structures onsite.

1.2.1.2 McIntyre Parcel Subject Site Structures

Due to access limitations, the McIntyre parcel was not accessed. The DCR site field representative indicated there is a structure on or near the McIntyre parcel that has been utilized as the owner's hunting cabin. The age of the cabin is unknown but believed to be more than 55 years old.

1.3 Cultural Resources Summary

1.3.1 Owens and TNC Parcels

Based on these findings, ECS believes the potential for adverse impacts to the archaeological and/or architectural resources on the adjacent north properties is low; however, there are potential impacts to resources on the subject site. The Breeding Cemetery is located within the site's limits with a fence marking the perceived cemetery's limits. The likelihood of future use of the site as a state park impacting the cemetery is low; however, there is potential DHR may request additional surveys due to the historical use of the area, the structures on the subject site, and a cemetery being present within the site's boundaries. If greater project certainty is required, ECS can submit the project to DHR for their technical assistance with a request asking if additional surveys will be requested prior to development or purchase.

1.3.1 McIntyre Parcel

Based on the database review, ECS believes the potential for adverse impacts to archaeological and/or architectural resources is low. It is reported that a hunting cabin is located on or near the subject property which may be more than 55 years old and as such, there is the potential DHR may request additional surveys due to the historical use of the area, close proximity to the river, and the inferred age of the

structure. If greater project certainty is required, ECS can submit the project to DHR for their technical assistance with a request asking if additional surveys will be requested prior to development or purchase.

Supporting documentation for the Cultural Resources desktop review is provided in Appendix III-A for the Owens and TNC Parcels and Appendix III-B for the McIntyre Parcel.

Section 2.0 – Threatened and Endangered Species

2.1 Threatened and Endangered Species Desktop Review

2.1.1 Department of Wildlife Resources (DWR)

2.1.1.1 Virginia Fish and Wildlife Information Service (VAFWIS):

ECS conducted a search of the Virginia Department of Wildlife Resources (DWR) Fish and Wildlife Information Service (VAFWIS) threatened and endangered species database to evaluate documented occurrences of Federal and/or state listed species within a two-mile radius of both project sites. According to VAFWIS, both the Owens and TNC Parcels and the McIntyre Parcel properties generated the same species results. Multiple fish and clam species were identified within a 2-mile radius of the subject site. The Clinch River, which borders the project site, provides suitable habitat for the species listed and they have been documented in the river in the past.

2.1.1.2 Northern Long-eared Bat (*Myotis septentrionalis*) Habitat and Roost Trees:

The Northern Long-eared Bat (NLEB) Habitat and Roost Trees Data Explorer database was reviewed to evaluate if documented occurrences or potential habitat for the federally threatened NLEB are within the project boundaries. The review identified the subject site is not located within 150-ft of a known occupied maternity roost or within ¼-mi of a known NLEB hibernaculum. However, for greater project certainty, a project review request was submitted to the USFWS as part of the project review submittal package.

2.1.1.3 Little Brown Bat (*Myotis lucifugus* - MYLU) and Tri-colored Bat (*Perimyotis subflavus* - PESU):

A review of the Little Brown Bat (MYLU)/Tri-colored Bat (PESU) Habitat Data Explorer database was conducted to evaluate if documented occurrences or potential habitat for the state endangered species are within the project boundaries. The review identified the subject sites are within the 5.5-mi hibernaculum buffer zone.

2.1.2 U.S. Fish and Wildlife Service (USFWS):

ECS conducted a review of the U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC) database to evaluate the documented occurrences or potential habitat for federally-listed species within the project boundaries.

2.1.2.1 Owens and TNC Parcels

According to USFWS, the Official Species List (OSL) revealed 3 bat species, 19 fish/mussel species associated with the River, and 2 critical habitats within close proximity of the subject site. The two

critical habitats are for Fluted Kidneyshell (*Ptychobranchus subtentus*) and Slabside Perlymussel (*Pleuronaia dolabelloides*) which are aquatic species associated with the River. Due to the number of species identified on the OSL, ECS believes a project review submission should be submitted to USFWS when project impacts are more refined.

2.1.2.2 McIntyre Parcel

According to USFWS, the OSL revealed 3 bat species and 19 fish/mussel species associated with the river. Due to the number of species identified on the OSL, ECS believes a project review submission should be submitted to USFWS when project impacts can better be determined.

2.1.3 Virginia Department of Conservation and Recreation (DCR):

A review of the VA Natural Heritage Data Explorer database showed the Clinch River – Lick Creek/Thompson Creek/Big Cedar Creek Stream Conservation Unit (SCU) (Conservation Site ID: 4497) surrounding both the Owens and TNC Parcels and McIntyre Parcel properties. This system is believed to be listed as a SCU due to the documented presence of multiple endangered species and Critical Habitats, as discussed above.

2.1.4 The Center for Conservation Biology

The Center for Conservation Biology's (CCB) mapping tool was utilized to evaluate if bald eagle roosts and/or nests are located within close proximity of the subject site. Bald Eagle nests are not depicted on the CCB map. Neither of the subject properties fall within a bald eagle nest or roost buffer zone.

Supporting documentation for the Threatened and Endangered Species desktop review is provided in Appendix II-A for the Owens and TNC Parcels and Appendix II-B for the McIntyre Parcel.

2.2 Threatened and Endangered Species Site Reconnaissance

2.2.1 Owens and TNC Parcels

The site is comprised of open agricultural land and dense forested land with meandering channels along the Clinch River. Suitable habitat for aquatic species is present along and in the Clinch River. Suitable habitat for the bat species that were identified on the database searches is also present within the property's limits in the forested portions of the site.

2.2.2 McIntyre Parcel

Due to access limitations, the McIntyre parcel was not accessed. The property is reported to be utilized for hunting grounds and contains a hunting cabin. Due to the close proximity of the site to the Clinch River, there is potential suitable habitat along the site's boundaries for the listed aquatic species. The property is not believed to be forested based on aerial photographs, so roosting habitat for the listed bat species is likely marginal. Bats may forage on the property, but would be unlikely to have roost trees, although bats have been known to roost in human structures such as the reported hunting cabin.

2.3 Threatened and Endangered Species Summary

Due to the number of species identified on database searches, as well as the site reconnaissance observations, ECS believes a project review submission should be submitted for both project sites when project impacts are more refined.

Section 3.0 – Wetland and other Environmental Resources Desktop Review

Section 3.1 – Wetland and other Environmental Resources

A review of background information on soils, hydrology, USGS topography, National Wetlands Inventory maps (NWI), aerial photographs, and other relevant online information was conducted to provide preliminary information on locations of wetlands and streams within or around the subject study area. Supporting documentation is provided in Appendix I - Figures.

3.1.1 Topographic Map Review

3.1.1.1 Owens and TNC Parcels

The subject site falls within the Lebanon, VA quadrangle (Appendix I, Figure II). The topographic map indicates that the site has rolling hills and slopes in various directions. Structures are depicted throughout the subject site. The Breeding Cemetery is present in the eastern portion of the site. Multiple roadways or trails are depicted on the subject site as well. Reeds Valley Church is depicted to the immediate northeast of the subject site.

3.1.1.2 McIntyre Parcel

The subject site falls within the Lebanon, VA quadrangle (Appendix I, Figure II). The topographic map indicates that the site is relatively flat with no obvious topographical relief. A structure is depicted on or near the site's northern limits.

3.1.2 USDA Soil Review

3.1.2.1 Owens and TNC Parcels

The site is located in the Piedmont Physiographic Region. The site contains fifteen soil mapping units as indicated by the United States Department of Agriculture (USDA) Natural Resource Conservation Service's (NRCS) Web Soil Survey (Appendix I, Figure III). The following soil units are listed as hydric by the NRCS: 1E – Berks-Chiswell complex (35 to 55 percent slopes), 1F - Berks-Chiswell complex (55 to 80 percent slopes), 6E - Berks-Westmoreland complex (35 to 55 percent slopes), 17A - Chagrin loam (0 to 3 percent slopes, occasionally flooded), 61B - Wyrock-Marbie silt loams (3 to 8 percent slopes), and 61C -Wyrock-Marbie silt loams (8 to 15 percent slopes).

3.1.2.2 McIntyre Parcel

The site is located in the Piedmont Physiographic Region. The site contains three soil mapping units as indicated by the USDA NRCS Web Soil Survey (Appendix I, Figure III). The following soil units are

listed as hydric by the NRCS: 27A - Grigsby sandy loam (0 to 3 percent slopes, occasionally flooded) and 17A - Chagrin loam (0 to 3 percent slopes, occasionally flooded).

3.1.3 National Wetland Inventory (NWI), Resource Protection Areas (RPAs), and FEMA review

3.1.3.1 Owens and TNC Parcels

The NWI maps do not depict wetlands or stream channels within the site boundaries. The Clinch River borders portions of the eastern and northwestern property lines. FEMA floodplains are depicted on the northwestern portion of the site and along the Clinch River. The central portions of the subject site are located outside of a mapped FEMA floodplain (Appendix I, Figure VI). The site is located outside of Virginia's Coastal Zone and RPAs are therefore not present.

3.1.3.2 McIntyre Parcel

The NWI maps do not depict wetlands or stream channels within the site boundaries. The Clinch River borders the property to the north and west. FEMA floodplains are depicted within the site's limits and are associated with the Clinch River (Appendix I, Figure VI). The site is located outside of Virginia's Coastal Zone and RPAs are therefore not present.

Section 3.2 – Wetland and other Environmental Resources Site Visit

3.2.1 Owens and TNC Parcels

Two stream channels were observed on the subject site, one of each being located in the western portion of the site and in the northern portion of the site. These are depicted on the Site Features Map in Appendix IV.

3.2.2 McIntyre Parcel

Due to access limitations, the McIntyre parcel was not accessed. The property is reported to be utilized for hunting grounds and contains a hunting cabin. Due to the close proximity of the site to the Clinch River and mapped floodplains on the site, there is potential for wetlands to be present near the Clinch River.

Section 3.3 – Wetland and other Environmental Resources Summary

There appears to be jurisdictional WOUS features present on the subject site, most notably the Owens and TNC parcels. ECS recommends a WOUS Delineation and U.S. Army Corps of Engineers (USACE) Preliminary Jurisdictional Determination (PJD) to obtain agency agreement on the jurisdictional features. A WOUS Delineation and USACE PJD are valid for 5 years following the USACE issuance of the PJD documents. During the PJD's 5 year validity period, a WOUS permit application can be submitted to the regulatory agencies – USACE, Department of Environmental Quality (DEQ), and the Virginia Marine Resources Commission (VMRC) – for impacts to WOUS features, if any are proposed as part of the subsequent development of the site.

Clinch River Russell County Parcels

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This completes our scope of service for this project. If you have any questions or comments concerning the contents of the enclosed documents or other related topics, please feel free to contact us at (804) 353-6333.

Respectfully submitted,

ECS MID-ATLANTIC, LLC



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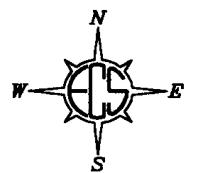
Enclosures: Appendix I – Figures
Appendix II-A – Owens and TNC Parcels Threatened & Endangered Species Search Results
Appendix II-B – McIntyre Parcel Threatened & Endangered Species Search Results
Appendix III-A – Owens and TNC Parcels Historic Resources Search Results
Appendix III-B – McIntyre Parcel Historic Resources Search Results
Appendix IV – Site Features Map

Appendix I

Figures



Figure 1A: Site Location Map
Project #47:11947 Clinch River—Owens and TNC Parcels
Russell County, Virginia



NOT TO SCALE

ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
MAY 2021
SOURCE: GOOGLE EARTH

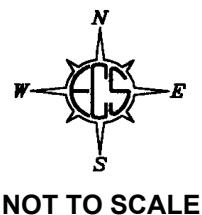
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Figure 1B: Site Location Map

**Project #47:11947 Clinch River—McIntyre Parcel
Russell County, Virginia**



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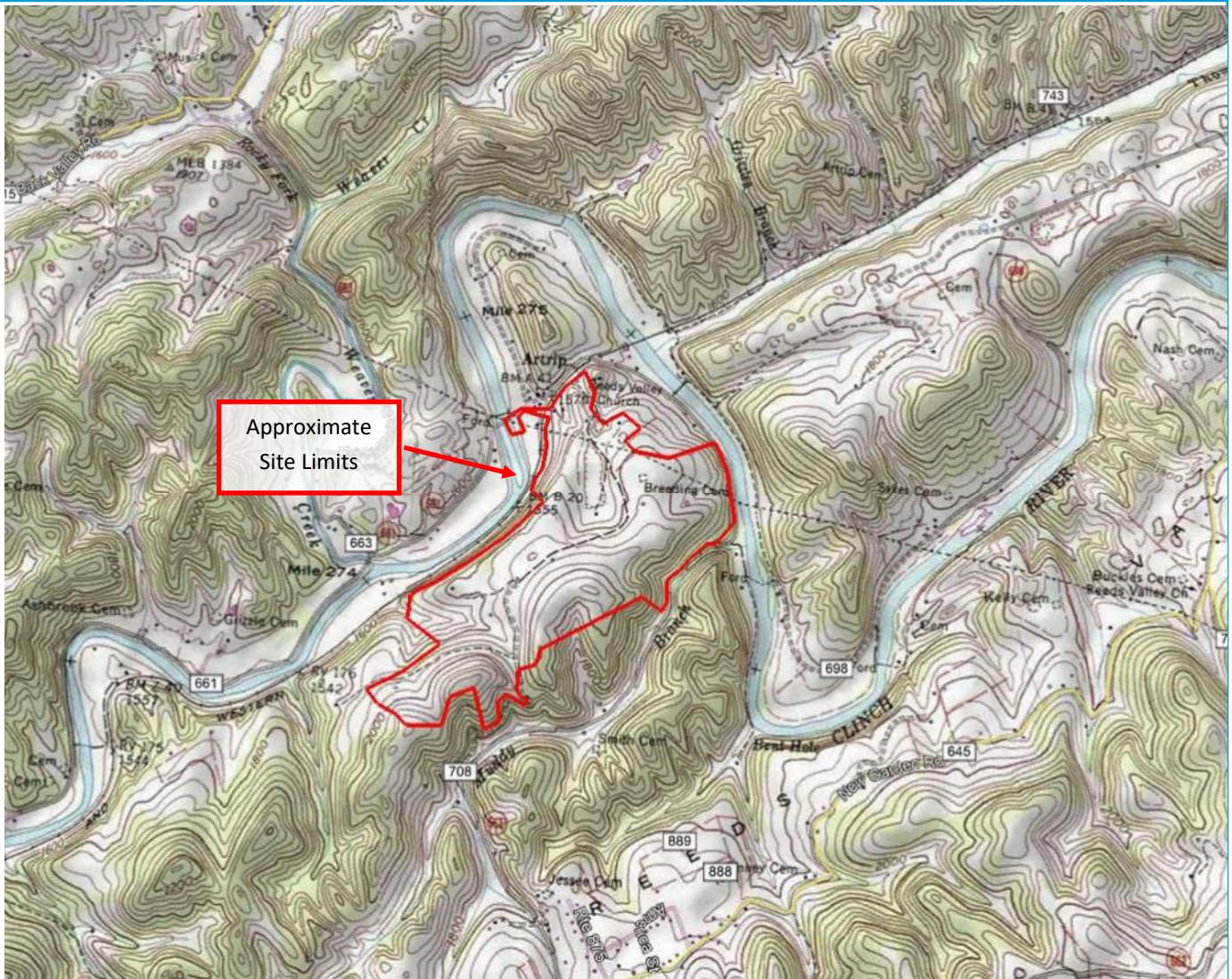
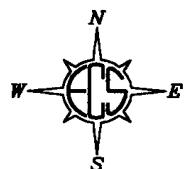


Figure 2A: USGS Topographic Map
Project #47:11947 Clinch River—Owens and TNC
Parcels
Russell County, Virginia

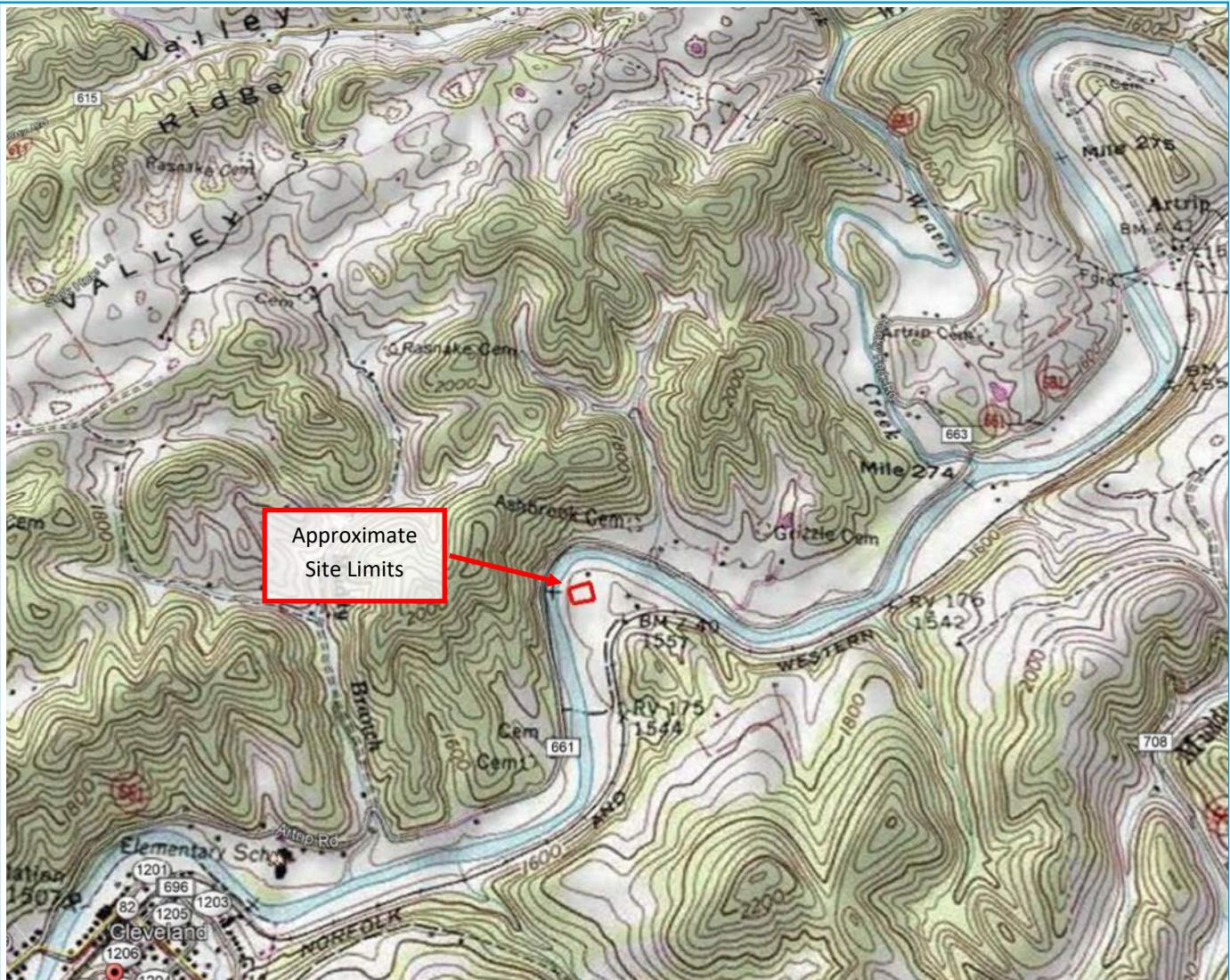


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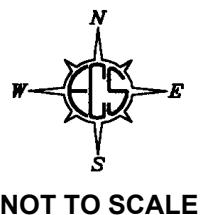
ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
MAY 2021
SOURCE: THE USGS STORE

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**Figure 2B: USGS Topographic Map
Project #47:11947 Clinch River—McIntyre Parcel
Russell County, Virginia**



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SOURCE: THE USGS STORE

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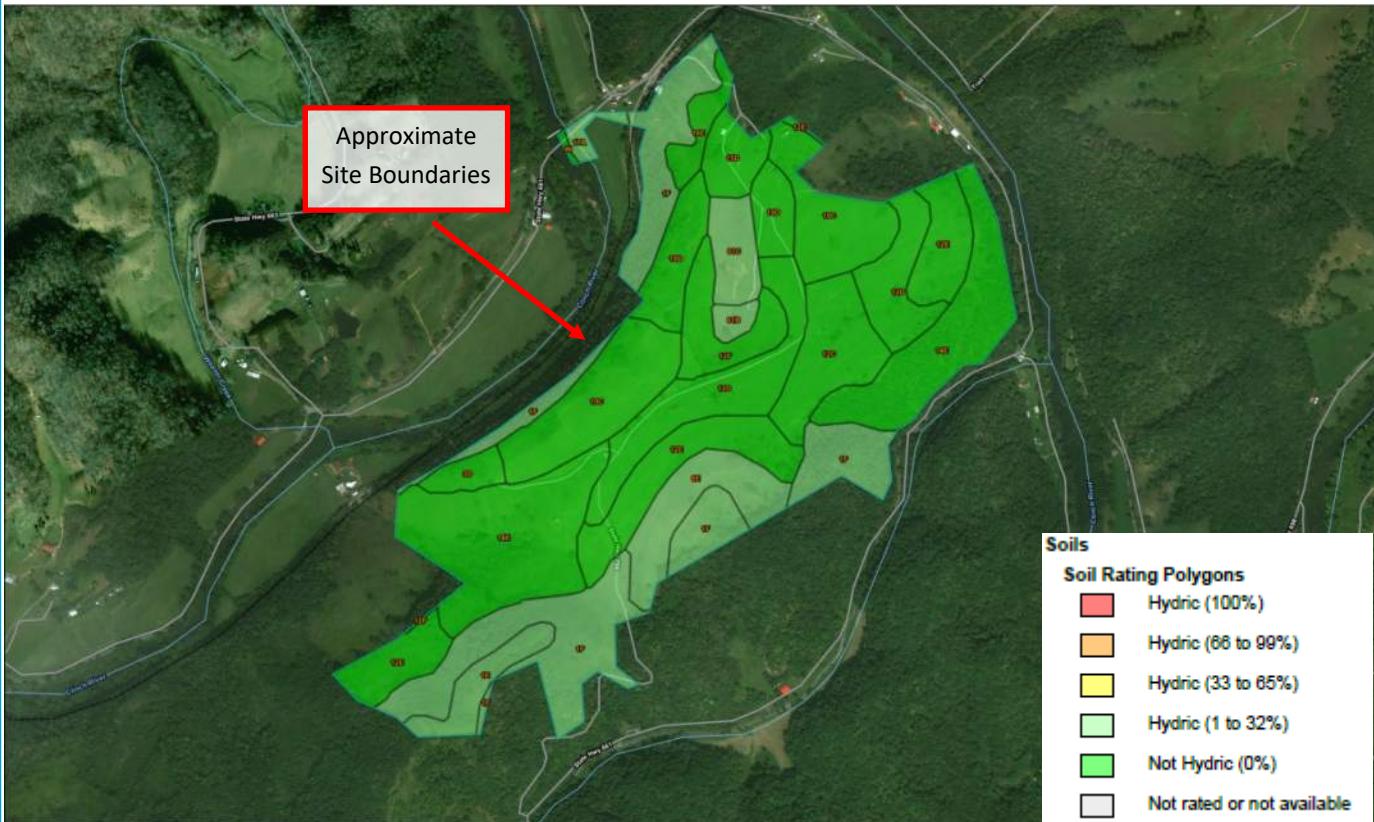
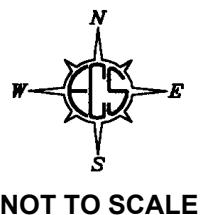


Figure 3A: USDA Soils Map
Project #47:11947 Clinch River—Owens and TNC Parcels
Russell County, Virginia



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ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
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SOURCE: NRCS WEB SOIL SURVEY

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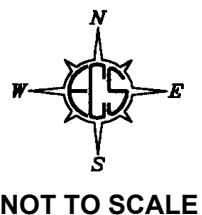




Figure 3B: USDA Soils Map

Project #47:11947 Clinch River—McIntyre Parcel

Russell County, Virginia



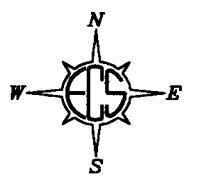
ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
MAY 2021
SOURCE: NRCS WEB SOIL SURVEY

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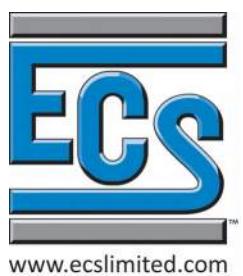
**Figure 4A: National Wetlands Inventory Map
Project #47:11947 Clinch River—Owens and TNC
Parcels
Russell County, Virginia**



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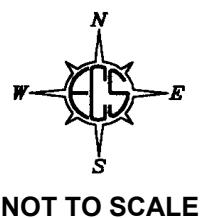
ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
MAY 2021
SOURCE: USFWS WETLANDS MAPPER

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**Figure 4B: National Wetlands Inventory Map
Project #47:11947 Clinch River—McIntyre Parcel
Russell County, Virginia**



ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
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SOURCE: USFWS WETLANDS MAPPER

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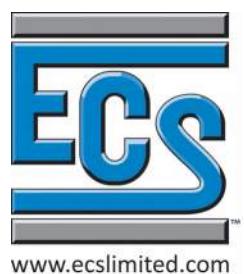
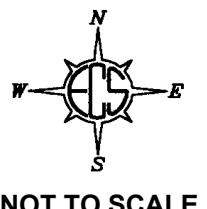




Figure 5A: FEMA Floodplain Map
Project #47:11947 Clinch River—Owens and TNC Parcels
Russell County, Virginia



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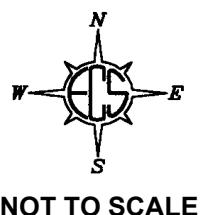
ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
MAY 2021
SOURCE: FEMA

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Figure 5B: FEMA Floodplain Map
Project #47:11947 Clinch River—McIntyre Parcel
Russell County, Virginia



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ENVIRONMENTAL DESKTOP REVIEW
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SOURCE: FEMA

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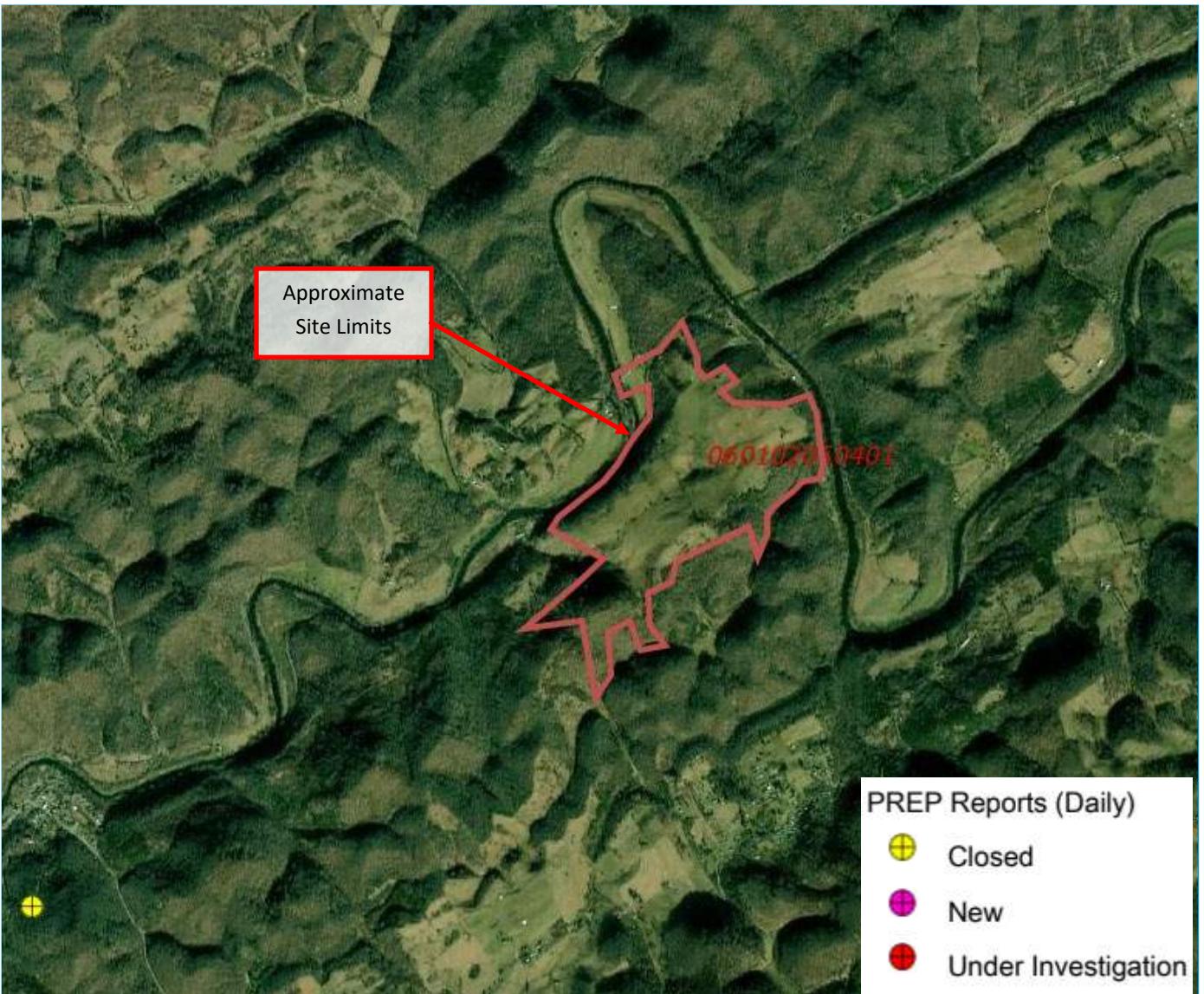


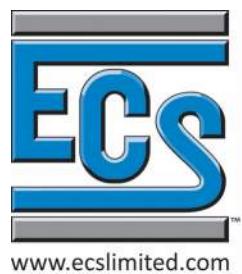
Figure 6A: DEQ Records Review
Project #47:11947 Clinch River—Owens and TNC Parcels
Russell County, Virginia



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ENVIRONMENTAL DESKTOP REVIEW
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SOURCE: DEQ PREP MAPPER

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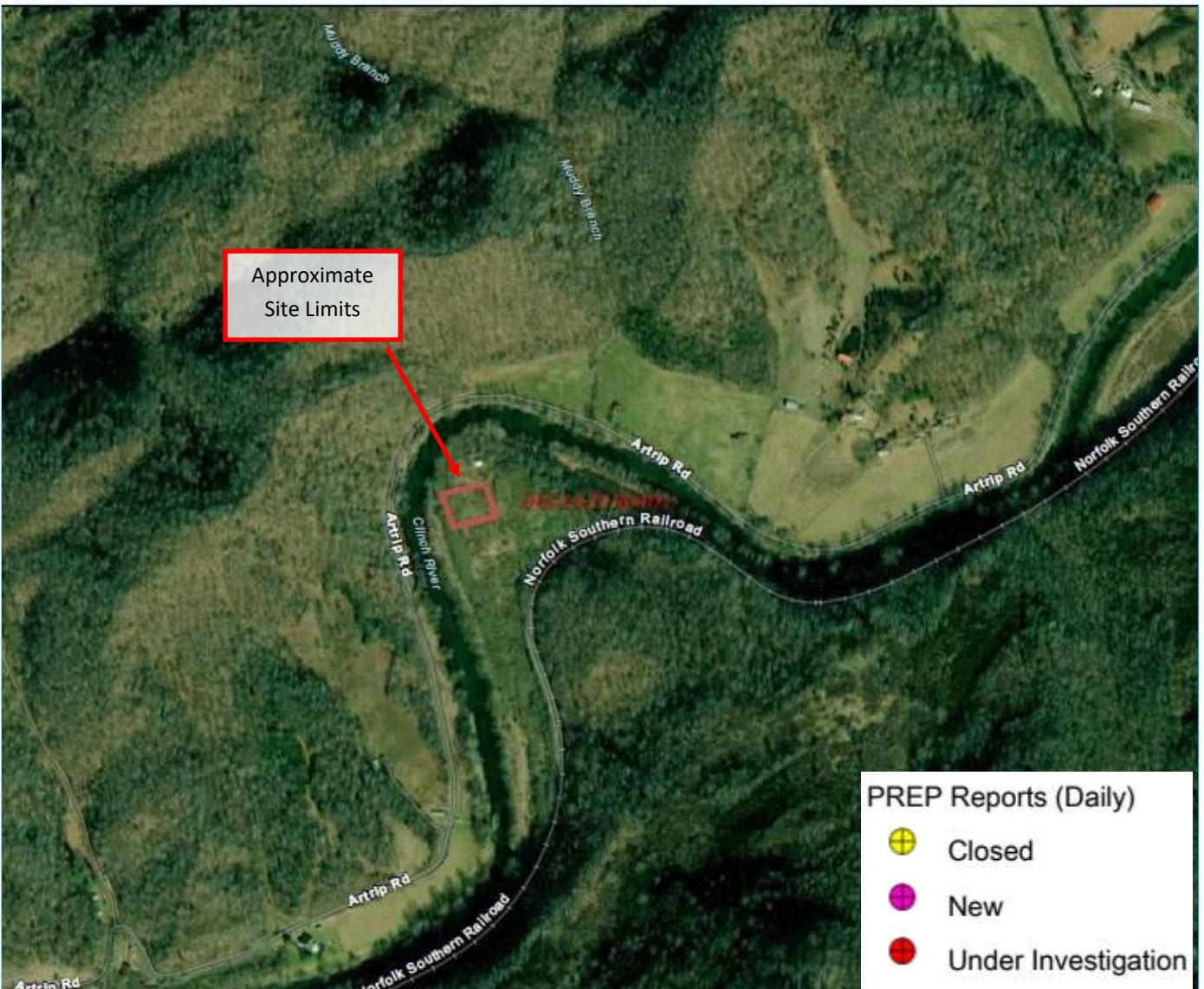
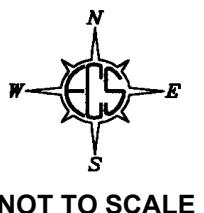
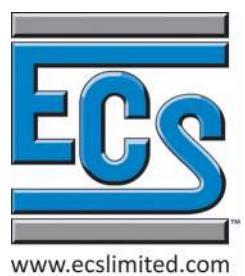


Figure 6B: DEQ Records Review
Project #47:11947 Clinch River—McIntyre Parcel
Russell County, Virginia



ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
MAY 2021
SOURCE: DEQ PREP MAPPER

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Appendix II-A
Owens and TNC Parcels
Threatened & Endangered Species Search Results

USFWS and DWR Database Results - Owens and TNC Parcels

Site Name	Agency	Category	Status	Species Name	Common Name	USFWS Critical Habitat	DWR T&E Water
Russell County - Owens and TNC Parcels	USFWS	Mammal	FE	<i>Myotis grisescens</i>	Gray Bat	No	-
		Mammal	FE	<i>Myotis sodalis</i>	Indiana Bat	No	-
		Mammal	FEST	<i>Myotis septentrionalis</i>	Northern Long-eared Bat	No	-
		Fish	FTST	<i>Noturus flavipinnis</i>	Yellowfin Madtom	No	Yes
		Clam	FESE	<i>Quadrula sparsa</i>	Appalachian Monkeyface (pearlymussel)	No	-
		Clam	FESE	<i>Lemiox rimosus</i>	Birdwing Pearlymussel	No	Yes
		Clam	FESE	<i>Hemistena lata</i>	Cracking Pearlymussel	No	No
		Clam	FE	<i>Villosa trabalis</i>	Cumberland Bean (pearlymussel)	No	-
		Clam	FE	<i>Quadrula intermedia</i>	Cumberland Monkeyface (pearlymussel)	No	Yes
		Clam	FESE	<i>Epioblasma brevidens</i>	Cumberlandian Combshell	No	Yes
		Clam	FESE	<i>Fusconaia cuneolus</i>	Finerayed Pigtoe	No	Yes
		Clam	FESE	<i>Ptychobranchus subtentus</i>	Fluted Kidneyshell	Yes	Yes
		Clam	FE	<i>Pegias fabula</i>	Littlewing Pearlymussel	No	-
		Clam	FESE	<i>Epioblasma capsaeformis</i>	Oyster Mussel	No	Yes
		Clam	FESE	<i>Villosa perpurpurea</i>	Purple Bean	No	Yes
		Clam	FESE	<i>Quadrula cylindrica strigillata</i>	Rough Rabbitsfoot	No	Yes
		Clam	FESE	<i>Plethobasus cyphyus</i>	Sheepnose Mussel	No	Yes
		Clam	FESE	<i>Fusconaia cor</i>	Shiny Pigtoe	No	Yes
		Clam	FESE	<i>Pleuronaia dolabelloides</i>	Slabside Pearlymussel	Yes	Yes
		Clam	FESE	<i>Epioblasma triquetra</i>	Snuffbox Mussel	No	Yes
		Clam	FESE	<i>Cumberlandia monodonta</i>	Spectaclecase (mussel)	No	Yes
		Clam	FE	<i>Epioblasma florentina walkeri (=E. walkeri)</i>	Tan Riffleshell	No	-
	DWR	Clam	FESE	<i>Venustaconcha trabalis</i>	Tennessee Bean	-	Yes
		Fish	FTST	<i>Erimystax cahni</i>	Slender Chub	-	Yes
		Clam	SE	<i>Elliptio crassidens</i>	Elephantear	-	Yes
		Clam	SE	<i>Truncilla truncata</i>	Deertoe	-	Yes
		Fish	ST	<i>Etheostoma denoncourti</i>	Golden Darter	-	Yes
		Clam	ST	<i>Io fluvialis</i>	Spiny Riversnail	-	Yes
		Clam	ST	<i>Ligumia recta</i>	Black Sandshell	-	Yes
		Fish	ST	<i>Cyprinella whipplei</i>	Steelcolor Shiner	-	Yes
		Fish	ST	<i>Notropis atherinoides</i>	Emerald Shiner	-	Yes
		Clam	ST	<i>Leptodea fragilis</i>	Fragile Papershell	-	Yes
		Clam	FP	<i>Fusconaia subrotunda</i>	Longsolid	-	No



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032
<http://www.fws.gov/northeast/virginiafield/>

In Reply Refer To: April 22, 2021
Consultation Code: 05E2VA00-2021-SLI-3311
Event Code: 05E2VA00-2021-E-09602
Project Name: Clinch River - Russell Owens & McI

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:
<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;
<http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office

6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2021-SLI-3311

Event Code: 05E2VA00-2021-E-09602

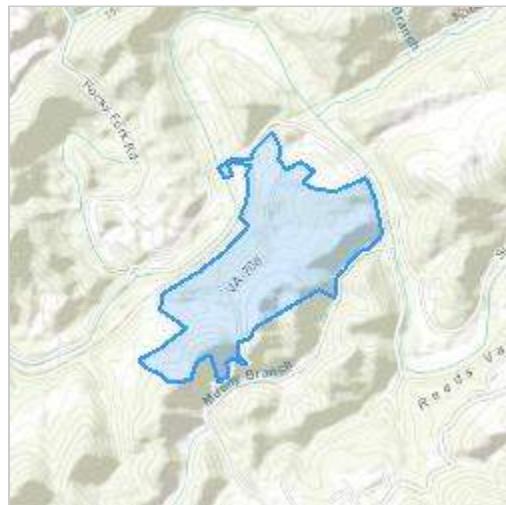
Project Name: Clinch River - Russell Owens & McI

Project Type: RECREATION CONSTRUCTION / MAINTENANCE

Project Description: Project is located in Russell County, VA and proposed for potential recreational use.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.958171300000004,-82.11586436940595,14z>



Counties: Russell County, Virginia

Endangered Species Act Species

There is a total of 22 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i>	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	
Indiana Bat <i>Myotis sodalis</i>	Endangered
There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	
Northern Long-eared Bat <i>Myotis septentrionalis</i>	Threatened
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	

Fishes

NAME	STATUS
Yellowfin Madtom <i>Noturus flavipinnis</i>	Threatened

Population: Wherever found, except where listed as an experimental population
There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: <https://ecos.fws.gov/ecp/species/8565>

Clams

NAME	STATUS
Appalachian Monkeyface (pearlymussel) <i>Quadrula sparsa</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7154	Endangered
Birdwing Pearlymussel <i>Lemiox rimosus</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6636	Endangered
Cracking Pearlymussel <i>Hemistena lata</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4130	Endangered
Cumberland Bean (pearlymussel) <i>Villosa trabalis</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6061	Endangered
Cumberland Monkeyface (pearlymussel) <i>Quadrula intermedia</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6999	Endangered
Cumberlandian Combshell <i>Epioblasma brevidens</i> Population: Wherever found; Except where listed as Experimental Populations There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3119	Endangered
Finerayed Pigtoe <i>Fusconaia cuneolus</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3038	Endangered
Fluted Kidneyshell <i>Ptychobranchus subtentus</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1397	Endangered
Littlewing Pearlymussel <i>Pegias fabula</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2572	Endangered
Oyster Mussel <i>Epioblasma capsaeformis</i> Population: Wherever found; Except where listed as Experimental Populations There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2099	Endangered
Purple Bean <i>Villosa perpurpurea</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4125	Endangered

NAME	STATUS
Rough Rabbitsfoot <i>Quadrula cylindrica strigillata</i>	Endangered
There is final critical habitat for this species. The location of the critical habitat is not available.	
Species profile: https://ecos.fws.gov/ecp/species/5629	
Sheepnose Mussel <i>Plethobasus cyphyus</i>	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/6903	
Shiny Pigtoe <i>Fusconaia cor</i>	Endangered
Population: Wherever found; Except where listed as Experimental Populations	
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/2573	
Slabside Pearlymussel <i>Pleuronaia dolabelloides</i>	Endangered
There is final critical habitat for this species. Your location overlaps the critical habitat.	
Species profile: https://ecos.fws.gov/ecp/species/1518	
Snuffbox Mussel <i>Epioblasma triquetra</i>	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/4135	
Spectaclecase (mussel) <i>Cumberlandia monodonta</i>	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/7867	
Tan Riffleshell <i>Epioblasma florentina walkeri</i> (= <i>E. walkeri</i>)	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/1247	

Critical habitats

There are 2 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Fluted Kidneyshell <i>Ptychobranchus subtentus</i>	Final
https://ecos.fws.gov/ecp/species/1397#crithab	
Slabside Pearlymussel <i>Pleuronaia dolabelloides</i>	Final
https://ecos.fws.gov/ecp/species/1518#crithab	

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Virginia Ecological Services Field Office

6669 Short Lane

Gloucester, VA 23061-4410

Phone: (804) 693-6694 Fax: (804) 693-9032

<http://www.fws.gov/northeast/virginiafield/>

IPaC Record Locator: 606-101466948

April 22, 2021

Subject: Consistency letter for the 'Clinch River - Russell Owens & McI' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Kaelyn Davis:

The U.S. Fish and Wildlife Service (Service) received on April 22, 2021 your effects determination for the 'Clinch River - Russell Owens & McI' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take"^[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

- Appalachian Monkeyface (pearlymussel) *Quadrula sparsa* Endangered
- Birdwing Pearlymussel *Lemiox rimosus* Endangered

- Cracking Pearlymussel *Hemistena lata* Endangered
- Cumberland Bean (pearlymussel) *Villosa trabalis* Endangered
- Cumberland Monkeyface (pearlymussel) *Quadrula intermedia* Endangered
- Cumberlandian Combshell *Epioblasma brevidens* Endangered
- Finerayed Pigtoe *Fusconaia cuneolus* Endangered
- Fluted Kidneyshell *Ptychobranchus subtentus* Endangered
- Gray Bat *Myotis grisescens* Endangered
- Indiana Bat *Myotis sodalis* Endangered
- Littlewing Pearlymussel *Pegias fabula* Endangered
- Oyster Mussel *Epioblasma capsaeformis* Endangered
- Purple Bean *Villosa perpurpurea* Endangered
- Rough Rabbitsfoot *Quadrula cylindrica strigillata* Endangered
- Sheepnose Mussel *Plethobasus cyphyus* Endangered
- Shiny Pigtoe *Fusconaia cor* Endangered
- Slabside Pearlymussel *Pleuronaia dolabelloides* Endangered
- Snuffbox Mussel *Epioblasma triquetra* Endangered
- Spectaclecase (mussel) *Cumberlandia monodonta* Endangered
- Tan Riffleshell *Epioblasma florentina walkeri* (=*E. walkeri*) Endangered
- Yellowfin Madtom *Noturus flavipinnis* Threatened

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

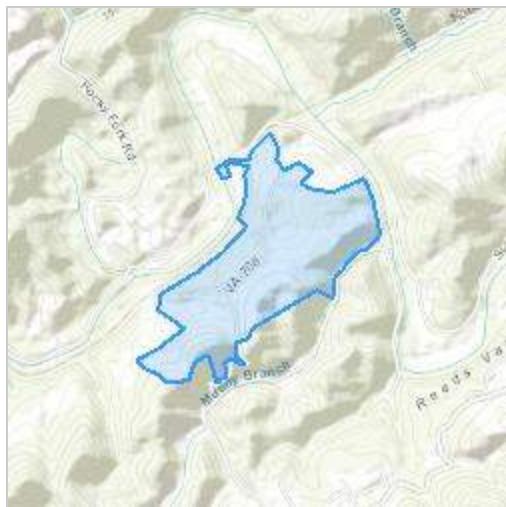
Clinch River - Russell Owens & McI

2. Description

The following description was provided for the project 'Clinch River - Russell Owens & McI':

Project is located in Russell County, VA and proposed for potential recreational use.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.95817130000004,-82.11586436940595,14z>



Determination Key Result

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

No

2. Will your activity purposefully **Take** northern long-eared bats?

No

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

Automatically answered

No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

No

6. Will the action involve Tree Removal?

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below.

Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below.

Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below.

Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

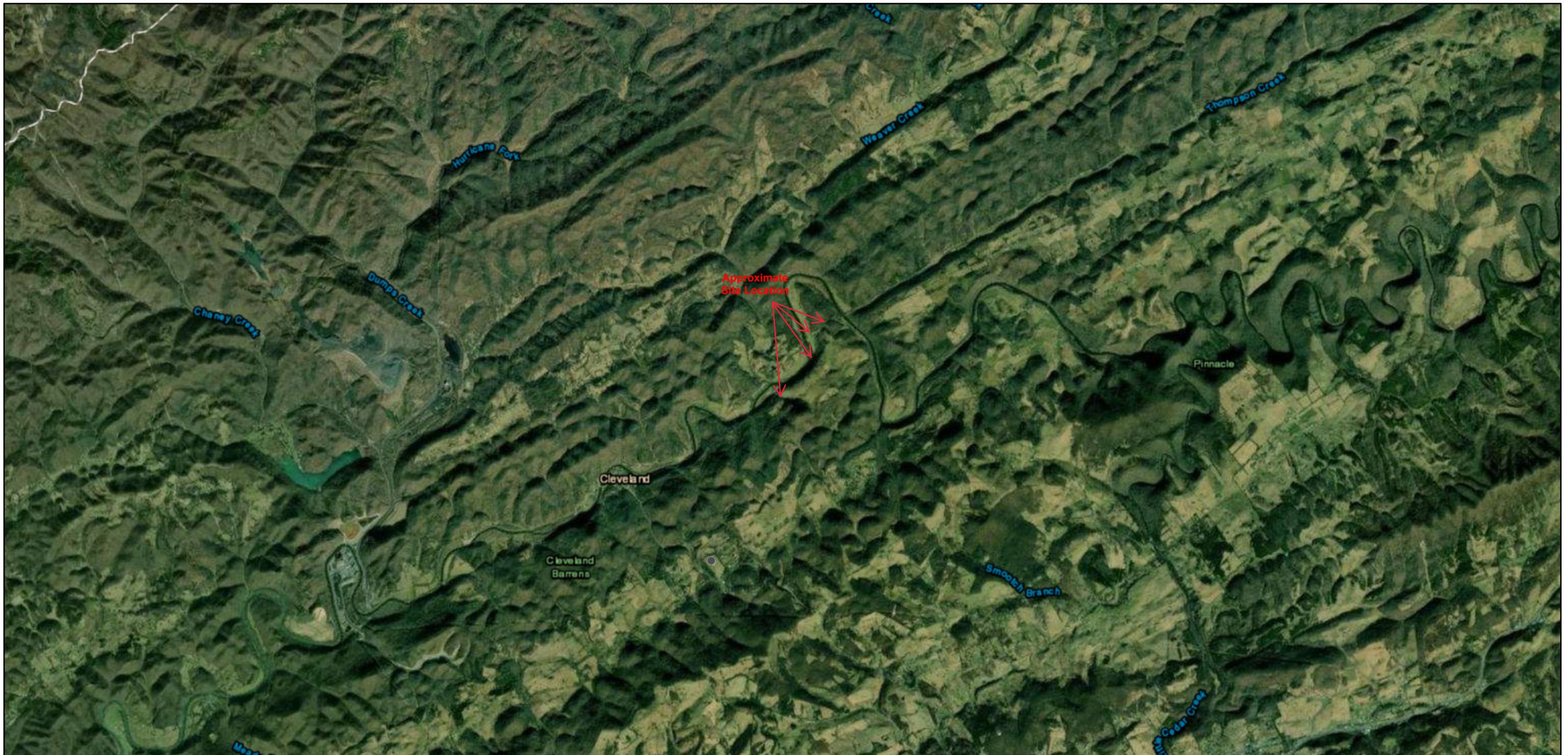
0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

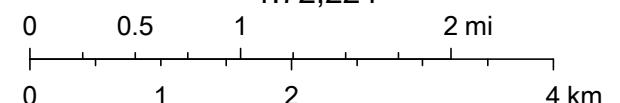
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NLEB Locations and Roost Trees

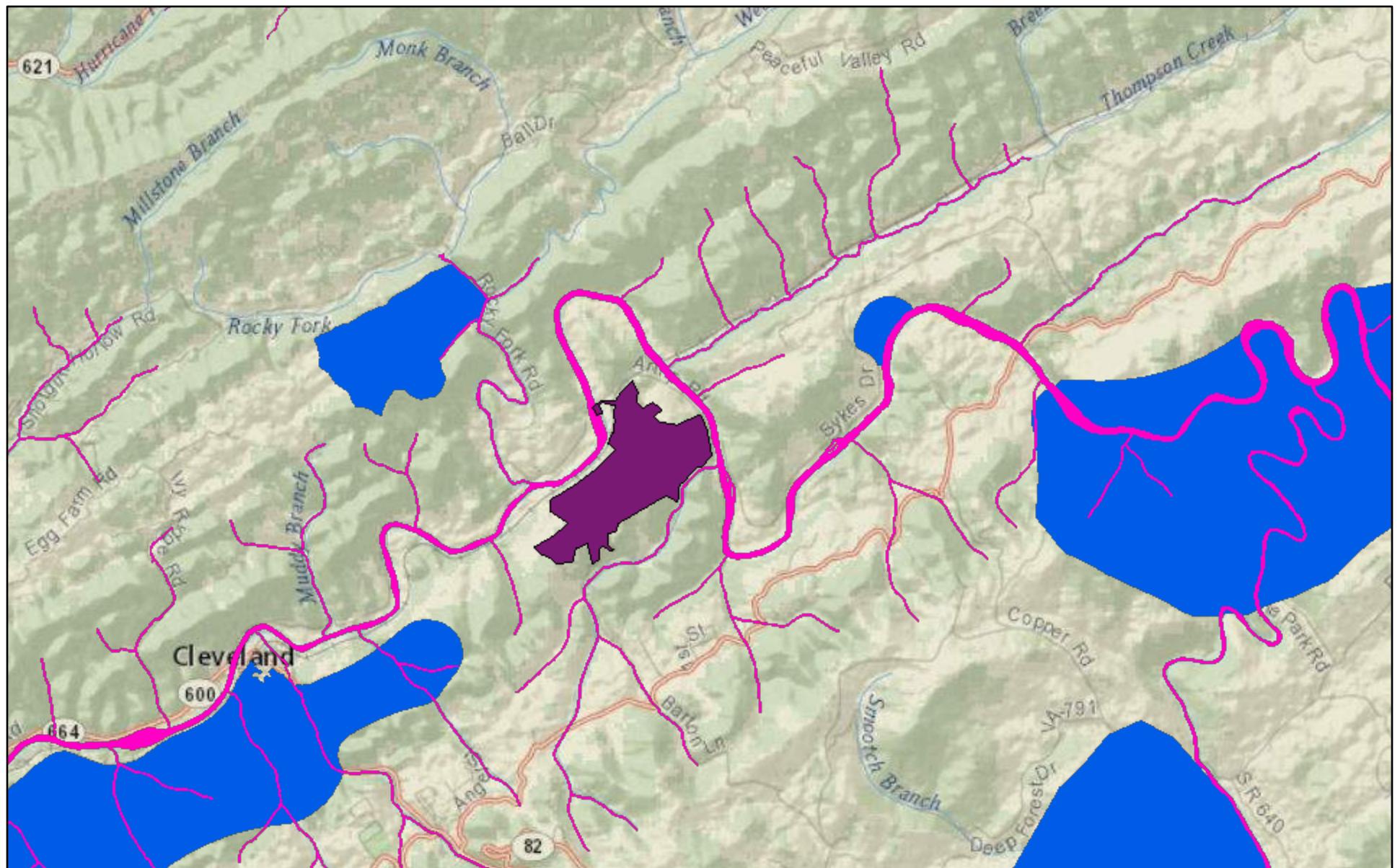


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Earthstar Geographics, VITA, Esri, HERE, Garmin



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\$MDHQW GVDWH

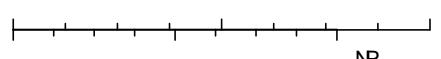


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60 \$ 72 \$ LQHFW 3RUS

Conservation Site ID	Conservation Site Name	Biodiversity Rank	Legal Status	Acres	Description	Type	Essential Conservation Site?
4497	CLINCH RIVER - LICK CREEK/THOMPSON CREEK/BIG CEDAR CREEK SCU	B2	FL	1036	This SCU delineates riparian reaches that provide habitat for one or more rare aquatic plants or animals.	SCU	YES

Site Location

36,57,36.2 -82,06,58.5
is the Search Point

Show Position Rings

Yes No
1 mile and 1/4 mile at the Search Point

Show Search Area

Yes No
2 Search distance miles radius

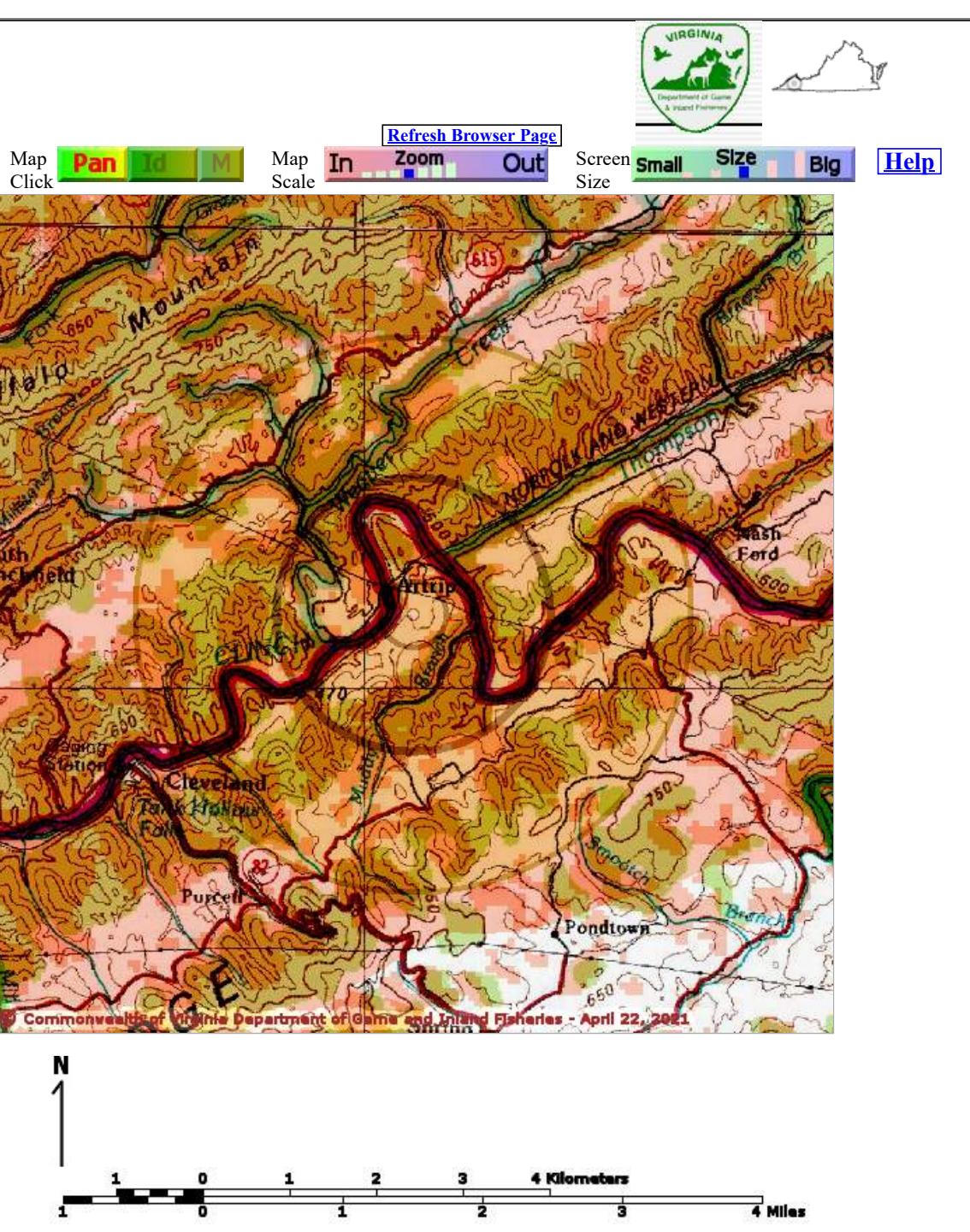
Search Point is at map center

Base Map Choices

Topography

Map Overlay Choices

Current List: Position, Search, BECAR, BAEANests, TEWaters, TierII, Habitat, Trout, Anadromous

Map Overlay Legend

Point of Search 36,57,36.2 -82,06,58.5

Map Location 36,57,36.2 -82,06,58.5

Select Coordinate System: Degrees,Minutes,Seconds Latitude - Longitude

- Decimal Degrees Latitude - Longitude
- Meters UTM83 East North Zone
- Meters UTM27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft.terraserver-usa.com for details)

Map projection is UTM Zone 17 NAD 1983 with left 395827 and top 4095825. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5

T & E Waters**Federal****State****Predicted Habitat****WAP Tier I & II****Aquatic****Terrestrial****Trout Waters****Class I - IV****Class V - VI****Anadromous Fish Reach****Confirmed****Potential**** Impediment****Bald Eagle Concentration Areas and Roosts**

square miles.

Topographic maps and Black and white aerial photography for year 1990+ are from the United States Department of the Interior, United States Geological Survey. Color aerial photography acquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.

Shaded topographic maps are from TOPO! ©2006 National Geographic
<http://www.nationalgeographic.com/topo>

All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2021-04-22 13:23:54 (qa qc March 21, 2016 12:20 - tn=1091080.0 dist=3218
I)
\$poi=36.9600690 -82.1162746

VaFWIS Initial Project Assessment Report Compiled on 4/22/2021,

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Known or likely to occur within a **2 mile radius around point 36.9600690 -82.1162746**
in **167 Russell County, VA**

[View Map of Site Location](#)

524 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 65) (65 species with Status* or Tier I** or Tier II**))

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
060147	FESE	Ia	Bean, Purple	<i>Villosa perpurpurea</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060169	FESE	Ia	Bean, Tennessee	<i>Venustaconcha trabalis</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060030	FESE	Ia	Combshell, Cumberlandian	<i>Epioblasma brevidens</i>	Yes	BOVA,TEWaters,SppObs
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	<i>Theliderma sparsa</i>	Yes	TEWaters,Habitat
060123	FESE	Ia	Monkeyface (pearlymussel), Cumberland	<i>Theliderma intermedia</i>	Yes	BOVA,Habitat,SppObs
060031	FESE	Ia	Mussel, oyster	<i>Epioblasma capsaeformis</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060035	FESE	Ia	Mussel, snuffbox	<i>Epioblasma triquetra</i>	Yes	BOVA,TEWaters
060020	FESE	Ia	Pearlymussel, birdwing.	<i>Lemiox rimosus</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060051	FESE	Ia	Pigtoe, finerayed	<i>Fusconaia cuneolus</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060052	FESE	Ia	Pigtoe, shiny	<i>Fusconaia cor</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060122	FESE	Ia	Rabbitsfoot, rough	<i>Theliderma cylindrica</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060082	FESE	Ib	Pearlymussel, cracking	<i>Hemistena lata</i>	Yes	BOVA,SppObs
060021	FESE	Ib	Spectaclecase	<i>Cumberlandia monodonta</i>	Yes	BOVA,TEWaters,Habitat
060094	FESE	Ic	Pearlymussel, littlewing	<i>Pegias fabula</i>		BOVA
050021	FESE	IIa	Bat, gray	<i>Myotis grisescens</i>		BOVA
060146	FESE	IIa	Bean, Rayed	<i>Villosa fabalis</i>		BOVA
060121	FESE	IIa	Kidneyshell, fluted	<i>Ptychobranchus subtentus</i>	Yes	BOVA,TEWaters,Habitat,SppObs

060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	Yes	BOVA,TEWaters,Habitat
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	Yes	BOVA,TEWaters,Habitat,SppObs
060034	FESE		Blossom, green	Epioblasma gubernaculum		Habitat
010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	Yes	BOVA,TEWaters,Habitat,SppObs
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
010111	FTST	Ic	Chub, slender	Erimystax cahni	Yes	BOVA,TEWaters,Habitat
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050027	SE	Ia	Bat, tri-colored	Perimyotis subflavus		BOVA
060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis		BOVA
060080	SE	IIa	Heelsplitter, Tennessee	Lasmigona holstonia		BOVA,Habitat
060174	SE	IIa	Pigtoe, pyramid	Pleurobema rubrum		BOVA
060139	SE	IIC	Lilliput, purple	Toxolasma lividum		BOVA
060027	SE	IIIa	Elephantear	Elliptio crassidens	Yes	BOVA,TEWaters,Habitat
060168	SE	IIIb	Deertoe	Truncilla truncata	Yes	BOVA,TEWaters,Habitat
040267	SE		Wren, Bewick's	Thryomanes bewickii		BOVA
040096	ST	Ia	Falcon, peregrine	Falco peregrinus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
010342	FPST	Ic	Darter, sickle	Percina williamsi		BOVA,Habitat
010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	Yes	BOVA,TEWaters,SppObs
060069	ST	IIIa	Riversnail, spiny	Io fluvialis	Yes	BOVA,TEWaters,Habitat,SppObs
060086	ST	IIIa	Sandshell, black	Ligumia recta	Yes	BOVA,TEWaters,Habitat,SppObs
010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	Yes	BOVA,TEWaters,Habitat
060124	ST	IVb	Pimpleback	Cyclonaias pustulosa		BOVA
010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes	BOVA,TEWaters,Habitat
060163	ST	IVc	Papershell, fragile	Leptodea fragilis	Yes	BOVA,TEWaters,Habitat
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus		BOVA

				migrans		
060053	FP	IIIa	Longsolid	Fusconia subrotunda	Yes	BOVA,SppObs
020020	CC	Ia	Hellbender, eastern	Cryptobranchus alleganiensis alleganiensis		BOVA
020030	CC	IIb	Salamander, green	Aneides aeneus		BOVA
030012	CC	IVa	Rattlesnake, timber	Crotalus horridus		BOVA
010449		Ia	Dace, Clinch	Chrosomus sp. cf. saylori	Yes	BOVA,Habitat,SppObs
040092		Ia	Eagle, golden	Aquila chrysaetos		BOVA
040306		Ia	Warbler, golden-winged	Vermivora chrysoptera		BOVA
050024		Ia	Myotis, eastern small-footed	Myotis leibii		BOVA
100248		Ia	Fritillary, regal	Speyeria idalia idalia		BOVA
010343		Ib	Darter, ashy	Etheostoma cinereum	Yes	BOVA,SppObs
040213		Ic	Owl, northern saw-whet	Aegolius acadicus		BOVA
010341		IIa	Logperch, blotchside	Percina burtoni	Yes	BOVA,Habitat,SppObs
020011		IIa	Frog, mountain chorus	Pseudacris brachyphona		BOVA,Habitat
040052		IIa	Duck, American black	Anas rubripes		BOVA
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA
040140		IIa	Woodcock, American	Scolopax minor		BOVA
060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	Yes	BOVA,Habitat,SppObs
040203		IIb	Cuckoo, black-billed	Coccyzus erythrophthalmus		BOVA
010075		IIc	Shiner, popeye	Notropis ariommus	Yes	BOVA,Habitat,SppObs
020081		IIc	Salamander, southern zigzag	Plethodon ventralis		BOVA
040304		IIc	Warbler, Swainson's	Limnothlypis swainsonii		BOVA
060004		IIc	Elktoe	Alasmidonta marginata	Yes	BOVA,SppObs

To view All 524 species [View 524](#)

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need;

IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

Virginia Widlife Action Plan Conservation Opportunity Ranking:

a - On the ground management strategies/actions exist and can be feasibly implemented.;

b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;

c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams

N/A

Colonial Water Bird Survey

N/A

Threatened and Endangered Waters (19 Reaches)

[View Map of All Threatened and Endangered Waters](#)

Stream Name	T&E Waters Species					View Map
	Highest TE *	BOVA Code, Status * , Tier ** , Common & Scientific Name				
Clinch River (0251897)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010433	ST	IIb	Darter, golden	Etheostoma denoncourti
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta

		060121	FESE	Ia	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIIb	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha tratalis
Clinch River (0252126)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIIb	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha tratalis
Clinch River (0253964)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
						Yes

	010433	ST	IIb	Darter, golden	Etheostoma denoncourtii		
	060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus		
	060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta		
	060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis		
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus		
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis		
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides		
	060086	ST	IIIa	Sandshell, black	Ligumia recta		
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus		
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
	060168	SE	IIIb	Deertoe	Truncilla truncata		
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trahalis		
Clinch River (0254069)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	

		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIIb	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis
Clinch River (0256000)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010433	ST	IIb	Darter, golden	Etheostoma denoncourti
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIIb	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis
Clinch River (0257830)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis

	010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei		
	010433	ST	IIb	Darter, golden	Etheostoma denoncourtii		
	060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus		
	060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta		
	060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis		
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus		
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis		
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides		
	060086	ST	IIIa	Sandshell, black	Ligumia recta		
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus		
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
	060168	SE	IIIb	Deertoe	Truncilla truncata		
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		
Clinch River (0257856)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
		060083	FESE	IIa	Pearlymussel,	Pleuronaia	

			slabside	dolabelloides		
060086	ST	IIIa	Sandshell, black	Ligumia recta		
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus		
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
060168	SE	IIIb	Deertoe	Truncilla truncata		
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		
Clinch River (0259205)	FESE	010076	ST IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST Ic	Chub, slender	Erimystax cahni	
		010331	FTST Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE IIIa	Elephantear	Elliottia crassidens	
		060030	FESE Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE Ia	Mussel, oyster	Epioblasma capsaeformis	
		060035	FESE Ia	Mussel, snuffbox	Epioblasma triquetra	
		060051	FESE Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE Ia	Pigtoe, shiny	Fusconaia cor	
		060069	ST IIIa	Riversnail, spiny	Io fluvialis	
		060083	FESE IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060086	ST IIIa	Sandshell, black	Ligumia recta	
		060110	FESE IIa	Mussel, sheepnose	Plethobasus	

					cyphyus	
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus		
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa		
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
060168	SE	IIIb	Deertoe	Truncilla truncata		
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		
Clinch River (0260949)	FESE	010076	ST IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST Ic	Chub, slender	Erimystax cahni	
		010331	FTST Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE Ib	Spectaclecase	Cumberlandia monodonta	
		060031	FESE Ia	Mussel, oyster	Epioblasma capsaeformis	
		060051	FESE Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE Ia	Pigtoe, shiny	Fusconaia cor	
		060069	ST IIIa	Riversnail, spiny	Io fluvialis	
		060083	FESE IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060086	ST IIIa	Sandshell, black	Ligumia recta	
		060121	FESE IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060122	FESE Ia	Rabbitsfoot, rough	Theliderma cylindrica	
		060147	FESE Ia	Bean, Purple	Villosa perpurpurea	
		060163	ST IVc	Papershell, fragile	Leptodea fragilis	
		060168	SE IIIb	Deertoe	Truncilla truncata	

		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Clinch River (0261249)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060086	ST	IIIa	Sandshell, black	Ligumia recta	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
		060168	SE	IIIb	Deertoe	Truncilla truncata	
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Clinch River (0261481)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	

	060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis		
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus		
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis		
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides		
	060086	ST	IIIa	Sandshell, black	Ligumia recta		
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus		
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
	060168	SE	IIIb	Deertoe	Truncilla truncata		
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		
Clinch River (0261492)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	

	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis		
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides		
	060086	ST	IIIa	Sandshell, black	Ligumia recta		
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus		
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus		
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa		
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
	060168	SE	IIIb	Deertoe	Truncilla truncata		
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		
Clinch River (0262027)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	

060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
060069	ST	IIIa	Riversnail, spiny	Io fluvialis
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
060086	ST	IIIa	Sandshell, black	Ligumia recta
060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
060163	ST	IVc	Papershell, fragile	Leptodea fragilis
060168	SE	IIIb	Deertoe	Truncilla truncata
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis

Clinch River (0262406)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	

Clinch River (0262725)	FESE	060069	ST	IIIa	Riversnail, spiny	Io fluvialis
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIib	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha tratalis
		010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIib	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha tratalis

Clinch River (0263631)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060086	ST	IIIa	Sandshell, black	Ligumia recta	
		060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
		060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis	

		060168	SE	IIib	Deertoe	Truncilla truncata	
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Clinch River (0263815)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060086	ST	IIIa	Sandshell, black	Ligumia recta	
		060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
		060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	

		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIIb	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis
Clinch River (0268200)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIIb	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis
Weaver Creek (0258405)	SE	060027	SE	IIIa	Elephantear	<i>Elliottio crassidens</i>

Yes

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Habitat Predicted for Aquatic WAP Tier I & II Species (9 Reaches)[View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species](#)

Stream Name	Tier Species					View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name				
Clinch River (60102051)	FESE	010075		IIc	Shiner, popeye	Notropis ariommus
		010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010332			Darter, Tippecanoe	Etheostoma tippecanoe
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010341		Ia	Logperch, blotchside	Percina burtoni
		010342	FPST	Ic	Darter, sickle	Percina williamsi
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
		060027	SE	IIIa	Elephantear	Elliptio crassidens
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
		060034	FESE		Blossom, green	Epioblasma gubernaculum
		060050		Ia	Pigtoe, Tennessee	Pleuronaia barnesiana

	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
	060086	ST	IIIa	Sandshell, black	Ligumia recta	
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
	060123	FESE	Ia	Monkeyface (pearlymussel), Cumberland	Theliderma intermedia	
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
	060168	SE	IIIb	Deertoe	Truncilla truncata	
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Monk Branch (60102051)		010449		Ia Dace, Clinch	Chrosomus sp. cf. saylori	Yes
Rocky Fork (60102051)	SE	010449		Ia Dace, Clinch	Chrosomus sp. cf. saylori	Yes
		060050		IIa Pigtoe, Tennessee	Pleuronaia barnesiana	
		060080	SE	IIa Heelsplitter, Tennessee	Lasmigona holstonia	
Rocky Fork (60102051)		010449		Ia Dace, Clinch	Chrosomus sp. cf. saylori	Yes
Thompson Creek (60102051)	FESE	060050		IIa Pigtoe, Tennessee	Pleuronaia barnesiana	Yes
		060080	SE	IIa Heelsplitter, Tennessee	Lasmigona holstonia	
		060121	FESE	IIa Kidneyshell, fluted	Ptychobranchus subtentus	

		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
Thompson Creek (60102051)	FESE	060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	Yes
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
tributary (60102051)		010449		Ia	Dace, Clinch	Chrosomus sp. cf. saylori	Yes
Weaver Creek (60102051)	FESE	010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	Yes
		060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
Weaver Creek (60102051)	FESE	060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	Yes
		060080	SE	IIa	Heelsplitter, Tennessee	Lasmigona holstonia	
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
Weaver Creek (60102051)	FESE	060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	Yes
		060080	SE	IIa	Heelsplitter, Tennessee	Lasmigona holstonia	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	

Habitat Predicted for Terrestrial WAP Tier I & II Species

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
020011		IIa	Frog, mountain chorus	Pseudacris brachyphona	Yes

Public Holdings:

N/A

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Compiled on 4/22/2021, 1:23:53 PM 11091080.0 report=IPA searchType=R dist= 3218 poi= 36.9600690 -82.1162746
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PixelSize=64; Anadromous=0.018961; BECAR=0.017389; Bats=0.017691; Buffer=0.060332; County=0.054288; Impediments=0.018187; Init=0.089774; PublicLands=0.018768; SppObs=0.232412; TEWaters=0.026754; TierReaches=0.049472; TierTerrestrial=0.1273; Total=0.887452; Tracking_BOVA=0.193508; Trout=0.019388
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Layers: VA Eagle Nest Locator, VA Eagle Nest Buffers

Map Center [longitude, latitude]: [-82.11593627929688, 36.955481877253476]

Map Link:

https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&layer=VA+Eagle+Nest+Buffers&zoom=14&lat=36.955481877253476&lng=-82.11593627929688&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=World+Imagery+%28ESRI%29

Report Generated On: 05/03/2021

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Report generated by [The Center for Conservation Biology Mapping Portal](#).

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Layers: Eagle Roosts, Eagle Roost Buffers, Eagle Roost Polygons

Map Center [longitude, latitude]: [-82.11593627929688, 36.955481877253476]

Map Link:

[https://ccbbirds.org/maps/#layer=Eagle+Roosts&layer=Eagle+Roost+Buffers&layer=Eagle+Roost+Polygons&zoo](https://ccbbirds.org/maps/#layer=Eagle+Roosts&layer=Eagle+Roost+Buffers&layer=Eagle+Roost+Polygons&zoom=14&lat=36.955481877253476&lng=-82.11593627929688&legend=legend_tab_59557df6-c07b-11e5-a485-0e31c9be1b51&base=World+Imagery+%28ESRI%29)
m=14&lat=36.955481877253476&lng=-82.11593627929688&legend=legend_tab_59557df6-c07b-11e5-a485-0e31c9be1b51&base=World+Imagery+%28ESRI%29

Report Generated On: 05/03/2021

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**Appendix II-B
McIntyre Parcel**

Threatened & Endangered Species Search Results

USFWS and DWR Database Results - McIntyre Parcel

Site Name	Agency	Category	Status	Species Name	Common Name	USFWS Critical Habitat	DWR T&E Water
Russell County - McIntyre	USFWS	Mammal	FE	<i>Myotis grisescens</i>	Gray Bat	No	-
		Mammal	FE	<i>Myotis sodalis</i>	Indiana Bat	No	-
		Mammal	FEST	<i>Myotis septentrionalis</i>	Northern Long-eared Bat	No	-
		Fish	FTST	<i>Noturus flavipinnis</i>	Yellowfin Madtom	No	Yes
		Clam	FESE	<i>Quadrula sparsa</i>	Appalachian Monkeyface (pearlymussel)	No	-
		Clam	FESE	<i>Lemiox rimosus</i>	Birdwing Pearlymussel	No	Yes
		Clam	FESE	<i>Hemistena lata</i>	Cracking Pearlymussel	No	No
		Clam	FE	<i>Villosa trabalis</i>	Cumberland Bean (pearlymussel)	No	-
		Clam	FE	<i>Quadrula intermedia</i>	Cumberland Monkeyface (pearlymussel)	No	Yes
		Clam	FESE	<i>Epioblasma brevidens</i>	Cumberlandian Combshell	No	Yes
		Clam	FESE	<i>Fusconaia cuneolus</i>	Finerayed Pigtoe	No	Yes
		Clam	FESE	<i>Ptychobranchus subtentus</i>	Fluted Kidneyshell	No	Yes
		Clam	FE	<i>Pegias fabula</i>	Littlewing Pearlymussel	No	-
		Clam	FESE	<i>Epioblasma capsaeformis</i>	Oyster Mussel	No	Yes
		Clam	FESE	<i>Villosa perpurpurea</i>	Purple Bean	No	Yes
		Clam	FESE	<i>Quadrula cylindrica strigillata</i>	Rough Rabbitsfoot	No	Yes
		Clam	FESE	<i>Plethobasus cyphyus</i>	Sheepnose Mussel	No	Yes
		Clam	FESE	<i>Fusconaia cor</i>	Shiny Pigtoe	No	Yes
		Clam	FESE	<i>Pleuronaia dolabelloides</i>	Slabside Pearlymussel	No	Yes
		Clam	FESE	<i>Epioblasma triquetra</i>	Snuffbox Mussel	No	Yes
		Clam	FESE	<i>Cumberlandia monodonta</i>	Spectaclecase (mussel)	No	Yes
		Clam	FE	<i>Epioblasma florentina walkeri (=E. walkeri)</i>	Tan Riffleshell	No	-
	DWR	Clam	FESE	<i>Venustaconcha trabalis</i>	Tennessee Bean	-	Yes
		Fish	FTST	<i>Erimystax cahni</i>	Slender Chub	-	Yes
		Clam	SE	<i>Elliptio crassidens</i>	Elephantear	-	Yes
		Clam	SE	<i>Truncilla truncata</i>	Deertoe	-	Yes
		Fish	ST	<i>Etheostoma denoncourti</i>	Golden Darter	-	Yes
		Clam	ST	<i>Io fluvialis</i>	Spiny Riversnail	-	Yes
		Clam	ST	<i>Ligumia recta</i>	Black Sandshell	-	Yes
		Fish	ST	<i>Cyprinella whipplei</i>	Steelcolor Shiner	-	Yes
		Fish	ST	<i>Notropis atherinoides</i>	Emerald Shiner	-	Yes
		Clam	ST	<i>Leptodea fragilis</i>	Fragile Papershell	-	Yes
		Clam	FP	<i>Fusconaia subrotunda</i>	Longsolid	-	No



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032
<http://www.fws.gov/northeast/virginiafield/>

In Reply Refer To:

April 22, 2021

Consultation Code: 05E2VA00-2021-SLI-3314

Event Code: 05E2VA00-2021-E-09613

Project Name: Clinch River - McI Parcel

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:
<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;
<http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office

6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2021-SLI-3314

Event Code: 05E2VA00-2021-E-09613

Project Name: Clinch River - McI Parcel

Project Type: RECREATION CONSTRUCTION / MAINTENANCE

Project Description: The project is located in Russell County and proposed for potential recreational use.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.95290939999996,-82.1398561503528,14z>



Counties: Russell County, Virginia

Endangered Species Act Species

There is a total of 22 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i>	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	
Indiana Bat <i>Myotis sodalis</i>	Endangered
There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	
Northern Long-eared Bat <i>Myotis septentrionalis</i>	Threatened
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	

Fishes

NAME	STATUS
Yellowfin Madtom <i>Noturus flavipinnis</i>	Threatened

Population: Wherever found, except where listed as an experimental population
There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: <https://ecos.fws.gov/ecp/species/8565>

Clams

NAME	STATUS
Appalachian Monkeyface (pearlymussel) <i>Quadrula sparsa</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7154	Endangered
Birdwing Pearlymussel <i>Lemiox rimosus</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6636	Endangered
Cracking Pearlymussel <i>Hemistena lata</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4130	Endangered
Cumberland Bean (pearlymussel) <i>Villosa trabalis</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6061	Endangered
Cumberland Monkeyface (pearlymussel) <i>Quadrula intermedia</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6999	Endangered
Cumberlandian Combshell <i>Epioblasma brevidens</i> Population: Wherever found; Except where listed as Experimental Populations There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3119	Endangered
Finerayed Pigtoe <i>Fusconaia cuneolus</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3038	Endangered
Fluted Kidneyshell <i>Ptychobranchus subtentus</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1397	Endangered
Littlewing Pearlymussel <i>Pegias fabula</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2572	Endangered
Oyster Mussel <i>Epioblasma capsaeformis</i> Population: Wherever found; Except where listed as Experimental Populations There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2099	Endangered
Purple Bean <i>Villosa perpurpurea</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4125	Endangered

NAME	STATUS
Rough Rabbitsfoot <i>Quadrula cylindrica strigillata</i>	Endangered
There is final critical habitat for this species. The location of the critical habitat is not available.	
Species profile: https://ecos.fws.gov/ecp/species/5629	
Sheepnose Mussel <i>Plethobasus cyphyus</i>	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/6903	
Shiny Pigtoe <i>Fusconaia cor</i>	Endangered
Population: Wherever found; Except where listed as Experimental Populations	
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/2573	
Slabside Pearlymussel <i>Pleuronaia dolabelloides</i>	Endangered
There is final critical habitat for this species. The location of the critical habitat is not available.	
Species profile: https://ecos.fws.gov/ecp/species/1518	
Snuffbox Mussel <i>Epioblasma triquetra</i>	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/4135	
Spectaclecase (mussel) <i>Cumberlandia monodonta</i>	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/7867	
Tan Riffleshell <i>Epioblasma florentina walkeri</i> (= <i>E. walkeri</i>)	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/1247	

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032
<http://www.fws.gov/northeast/virginiafield/>

IPaC Record Locator: 804-101468494

April 22, 2021

Subject: Consistency letter for the 'Clinch River - McI Parcel' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Kaelyn Davis:

The U.S. Fish and Wildlife Service (Service) received on April 22, 2021 your effects determination for the 'Clinch River - McI Parcel' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take"^[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

- Appalachian Monkeyface (pearlymussel) *Quadrula sparsa* Endangered
- Birdwing Pearlymussel *Lemiox rimosus* Endangered

- Cracking Pearlymussel *Hemistena lata* Endangered
- Cumberland Bean (pearlymussel) *Villosa trabalis* Endangered
- Cumberland Monkeyface (pearlymussel) *Quadrula intermedia* Endangered
- Cumberlandian Combshell *Epioblasma brevidens* Endangered
- Finerayed Pigtoe *Fusconaia cuneolus* Endangered
- Fluted Kidneyshell *Ptychobranchus subtentus* Endangered
- Gray Bat *Myotis grisescens* Endangered
- Indiana Bat *Myotis sodalis* Endangered
- Littlewing Pearlymussel *Pegias fabula* Endangered
- Oyster Mussel *Epioblasma capsaeformis* Endangered
- Purple Bean *Villosa perpurpurea* Endangered
- Rough Rabbitsfoot *Quadrula cylindrica strigillata* Endangered
- Sheepnose Mussel *Plethobasus cyphyus* Endangered
- Shiny Pigtoe *Fusconaia cor* Endangered
- Slabside Pearlymussel *Pleuronaia dolabelloides* Endangered
- Snuffbox Mussel *Epioblasma triquetra* Endangered
- Spectaclecase (mussel) *Cumberlandia monodonta* Endangered
- Tan Riffleshell *Epioblasma florentina walkeri* (=*E. walkeri*) Endangered
- Yellowfin Madtom *Noturus flavipinnis* Threatened

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Clinch River - McI Parcel

2. Description

The following description was provided for the project 'Clinch River - McI Parcel':

The project is located in Russell County and proposed for potential recreational use.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.95290939999996,-82.1398561503528,14z>



Determination Key Result

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

No

2. Will your activity purposefully **Take** northern long-eared bats?

No

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

Automatically answered

No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

No

6. Will the action involve Tree Removal?

Yes

7. Will the action only remove hazardous trees for the protection of human life or property?

No

8. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

No

9. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below.

Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below.

Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below.

Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

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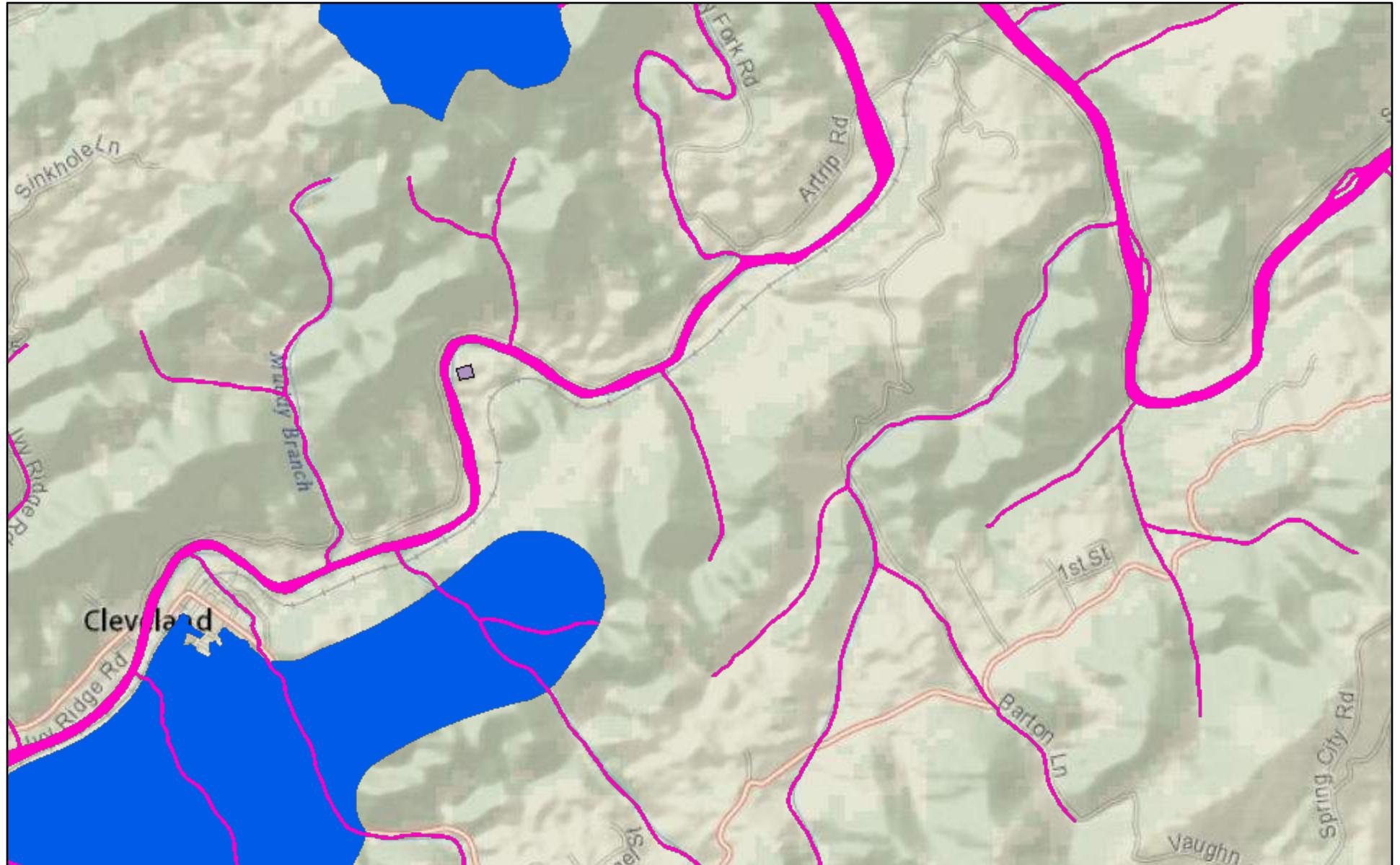


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Site Location

36,57,10.1 -82,08,23.5
is the Search Point

Show Position Rings

Yes No
1 mile and 1/4 mile at the Search Point

Show Search Area

Yes No
2 Search distance miles radius

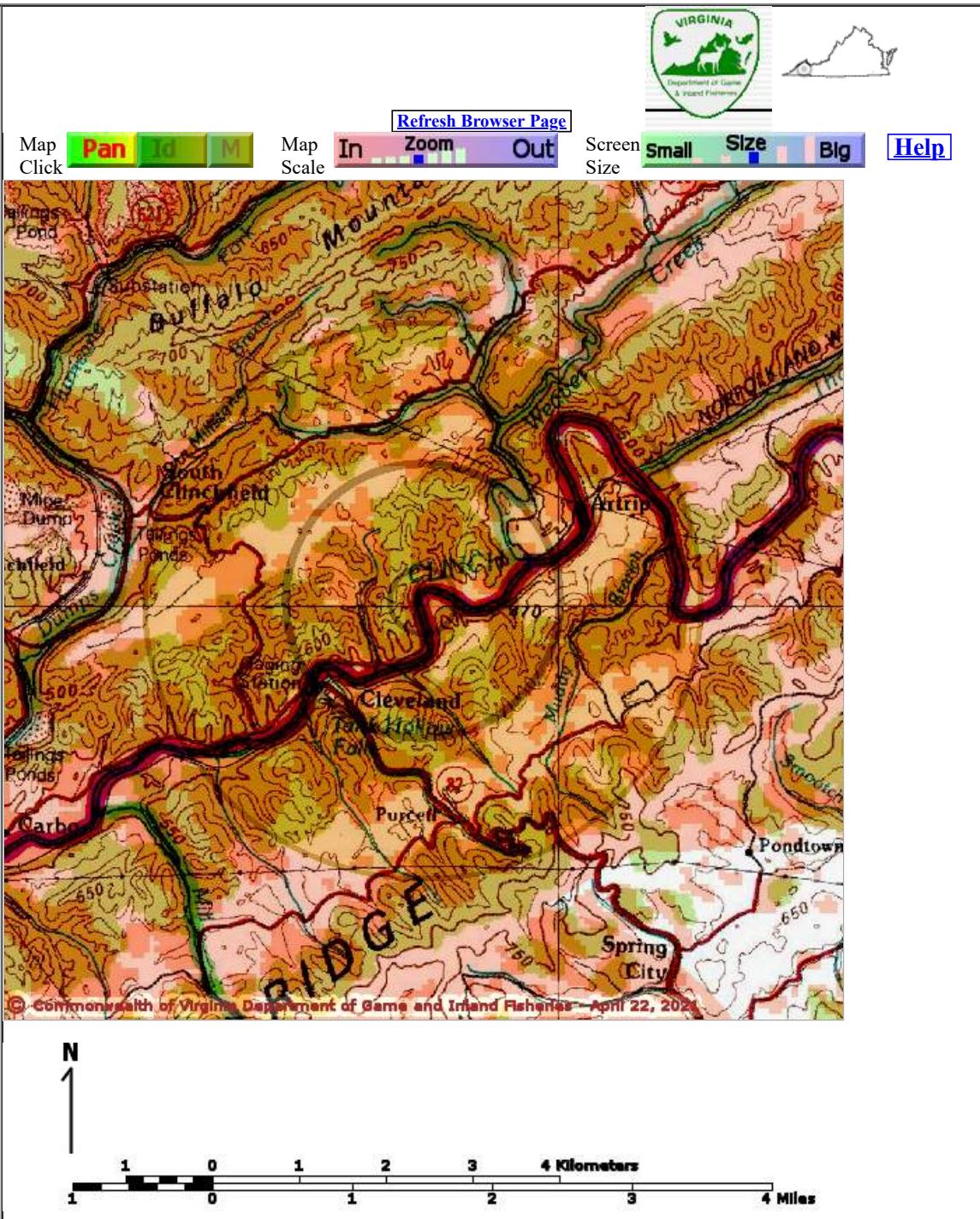
Search Point is at map center

Base Map Choices

Topography

Map Overlay Choices

Current List: Position, Search, BECAR, BAEANests, TEWaters, TierII, Habitat, Trout, Anadromous

Map Overlay Legend

Point of Search 36,57,10.1 -82,08,23.5

Map Location 36,57,10.1 -82,08,23.5

Select Coordinate System: Degrees,Minutes,Seconds Latitude - Longitude

- Decimal Degrees Latitude - Longitude
- Meters UTM NAD83 East North Zone
- Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft.terraserver-usa.com for details)

Map projection is UTM Zone 17 NAD 1983 with left 393716 and top 4095046. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5

T & E Waters**Federal****State****Predicted Habitat****WAP Tier I & II****Aquatic****Terrestrial****Trout Waters****Class I - IV****Class V - VI****Anadromous Fish Reach****Confirmed****Potential**** Impediment****Bald Eagle Concentration Areas and Roosts**

square miles.

Topographic maps and Black and white aerial photography for year 1990+ are from the United States Department of the Interior, United States Geological Survey. Color aerial photography acquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.

Shaded topographic maps are from TOPO! ©2006 National Geographic
<http://www.national.geographic.com/topo>

All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2021-04-22 14:54:42 (qa qc March 21, 2016 12:20 - tn=1091130.0 dist=3218
I)
\$poi=36.9528250 -82.1398775

VaFWIS Initial Project Assessment Report Compiled on 4/22/2021,

2:54:41 PM

Known or likely to occur within a **2 mile radius around point 36.9528250 -82.1398775**
in **167 Russell County, VA**

[View Map of Site Location](#)

522 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 65) (65 species with Status* or Tier I** or Tier II**))

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
060147	FESE	Ia	Bean, Purple	<i>Villosa perpurpurea</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060169	FESE	Ia	Bean, Tennessee	<i>Venustaconcha trabalis</i>	Yes	BOVA,TEWaters,Habitat
060030	FESE	Ia	Combshell, Cumberlandian	<i>Epioblasma brevidens</i>	Yes	BOVA,TEWaters,SppObs
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	<i>Theliderma sparsa</i>	Yes	TEWaters,Habitat
060123	FESE	Ia	Monkeyface (pearlymussel), Cumberland	<i>Theliderma intermedia</i>	Yes	BOVA,Habitat,SppObs
060031	FESE	Ia	Mussel, oyster	<i>Epioblasma capsaeformis</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060035	FESE	Ia	Mussel, snuffbox	<i>Epioblasma triquetra</i>	Yes	BOVA,TEWaters,SppObs
060020	FESE	Ia	Pearlymussel, birdwing.	<i>Lemiox rimosus</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060051	FESE	Ia	Pigtoe, finerayed	<i>Fusconaia cuneolus</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060052	FESE	Ia	Pigtoe, shiny	<i>Fusconaia cor</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060122	FESE	Ia	Rabbitsfoot, rough	<i>Theliderma cylindrica</i>	Yes	BOVA,TEWaters,Habitat,SppObs
060082	FESE	Ib	Pearlymussel, cracking	<i>Hemistena lata</i>	Yes	BOVA,Habitat,SppObs
060021	FESE	Ib	Spectaclecase	<i>Cumberlandia monodonta</i>	Yes	BOVA,TEWaters,Habitat
060094	FESE	Ic	Pearlymussel, littlewing	<i>Pegias fabula</i>		BOVA
050021	FESE	IIa	Bat, gray	<i>Myotis grisescens</i>		BOVA
060146	FESE	IIa	Bean, Rayed	<i>Villosa fabalis</i>		BOVA
060121	FESE	IIa	Kidneyshell, fluted	<i>Ptychobranchus subtentus</i>	Yes	BOVA,TEWaters,Habitat,SppObs

060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	Yes	BOVA,TEWaters,Habitat,SppObs
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	Yes	BOVA,TEWaters,Habitat,SppObs
060034	FESE		Blossom, green	Epioblasma gubernaculum		Habitat
010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	Yes	BOVA,TEWaters,Habitat,SppObs
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
010111	FTST	Ic	Chub, slender	Erimystax cahni	Yes	BOVA,TEWaters,Habitat
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050027	SE	Ia	Bat, tri-colored	Perimyotis subflavus		BOVA
060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis		BOVA
060080	SE	IIa	Heelsplitter, Tennessee	Lasmigona holstonia		BOVA,Habitat
060174	SE	IIa	Pigtoe, pyramid	Pleurobema rubrum		BOVA
060139	SE	IIC	Lilliput, purple	Toxolasma lividum		BOVA
060027	SE	IIIa	Elephantear	Elliptio crassidens	Yes	BOVA,TEWaters,Habitat,SppObs
060168	SE	IIIb	Deertoe	Truncilla truncata	Yes	BOVA,TEWaters,Habitat,SppObs
040267	SE		Wren, Bewick's	Thryomanes bewickii		BOVA
040096	ST	Ia	Falcon, peregrine	Falco peregrinus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
010342	FPST	Ic	Darter, sickle	Percina williamsi		BOVA,Habitat
010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	Yes	BOVA,TEWaters,SppObs
060069	ST	IIIa	Riversnail, spiny	Io fluvialis	Yes	BOVA,TEWaters,Habitat,SppObs
060086	ST	IIIa	Sandshell, black	Ligumia recta	Yes	BOVA,TEWaters,Habitat,SppObs
010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	Yes	BOVA,TEWaters,Habitat,SppObs
060124	ST	IVb	Pimpleback	Cyclonaias pustulosa		BOVA
010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes	BOVA,TEWaters,Habitat
060163	ST	IVc	Papershell, fragile	Leptodea fragilis	Yes	BOVA,TEWaters,Habitat,SppObs
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus		BOVA

				migrans		
060053	FP	IIIa	Longsolid	Fusconia subrotunda	Yes	BOVA,SppObs
020020	CC	Ia	Hellbender, eastern	Cryptobranchus alleganiensis alleganiensis		BOVA
020030	CC	IIb	Salamander, green	Aneides aeneus		BOVA
030012	CC	IVa	Rattlesnake, timber	Crotalus horridus		BOVA
010449		Ia	Dace, Clinch	Chrosomus sp. cf. saylori	Yes	BOVA,Habitat,SppObs
040092		Ia	Eagle, golden	Aquila chrysaetos		BOVA
040306		Ia	Warbler, golden-winged	Vermivora chrysoptera		BOVA
050024		Ia	Myotis, eastern small-footed	Myotis leibii		BOVA
100248		Ia	Fritillary, regal	Speyeria idalia idalia		BOVA
010343		Ib	Darter, ashy	Etheostoma cinereum	Yes	BOVA,SppObs
040213		Ic	Owl, northern saw-whet	Aegolius acadicus		BOVA
010341		IIa	Logperch, blotchside	Percina burtoni	Yes	BOVA,Habitat,SppObs
020011		IIa	Frog, mountain chorus	Pseudacris brachyphona		BOVA,Habitat
040052		IIa	Duck, American black	Anas rubripes		BOVA
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA
040140		IIa	Woodcock, American	Scolopax minor		BOVA
060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	Yes	BOVA,Habitat,SppObs
040203		IIb	Cuckoo, black-billed	Coccyzus erythrophthalmus		BOVA
010075		IIc	Shiner, popeye	Notropis ariommus	Yes	BOVA,Habitat,SppObs
020081		IIc	Salamander, southern zigzag	Plethodon ventralis		BOVA
040304		IIc	Warbler, Swainson's	Limnothlypis swainsonii		BOVA
060004		IIc	Elktoe	Alasmidonta marginata	Yes	BOVA,SppObs

To view All 522 species [View 522](#)

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need;

IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

Virginia Widlife Action Plan Conservation Opportunity Ranking:

a - On the ground management strategies/actions exist and can be feasibly implemented.;

b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;

c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams

N/A

Colonial Water Bird Survey

N/A

Threatened and Endangered Waters (19 Reaches)

[View Map of All Threatened and Endangered Waters](#)

Stream Name	T&E Waters Species					View Map	
	Highest TE *	BOVA Code, Status * , Tier ** , Common & Scientific Name					
Clinch River (0250922)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	

060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
060069	ST	IIIa	Riversnail, spiny	Io fluvialis
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
060086	ST	IIIa	Sandshell, black	Ligumia recta
060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
060163	ST	IVc	Papershell, fragile	Leptodea fragilis
060168	SE	IIIb	Deertoe	Truncilla truncata
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis

Clinch River (0253964)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	

		060069	ST	IIIa	Riversnail, spiny	Io fluvialis
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIib	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha tratalis
		010076	ST	IVc	Shiner, emerald	Notropis atherinoides
Clinch River (0256000)	FESE	010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIib	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha tratalis

Yes

Clinch River (0256440)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060086	ST	IIIa	Sandshell, black	Ligumia recta	
		060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
		060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis	

		060168	SE	IIib	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalalis
Clinch River (0257830.)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIib	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalalis
Clinch River (0257856.)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta

				monodonta			
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis			
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus			
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor			
060069	ST	IIIa	Riversnail, spiny	Io fluvialis			
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides			
060086	ST	IIIa	Sandshell, black	Ligumia recta			
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus			
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica			
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea			
060163	ST	IVc	Papershell, fragile	Leptodea fragilis			
060168	SE	IIIb	Deertoe	Truncilla truncata			
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trahalis			
Clinch River (0259205)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia	

				cuneolus
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
060069	ST	IIIa	Riversnail, spiny	Io fluvialis
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
060086	ST	IIIa	Sandshell, black	Ligumia recta
060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
060163	ST	IVc	Papershell, fragile	Leptodea fragilis
060168	SE	IIIb	Deertoe	Truncilla truncata
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis
Clinch River (0260949)	FESE			
010076	ST	IVc	Shiner, emerald	Notropis atherinoides
010111	FTST	Ic	Chub, slender	Erimystax cahni
010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
010433	ST	IIb	Darter, golden	Etheostoma denoncourtii
060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
060069	ST	IIIa	Riversnail, spiny	Io fluvialis
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides

Yes

		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIIb	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis
Clinch River (0261249)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010433	ST	IIb	Darter, golden	Etheostoma denoncourti
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIIb	Deertoe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis
Clinch River (0261481)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis

	010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei		
	010433	ST	IIb	Darter, golden	Etheostoma denoncourtii		
	060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus		
	060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta		
	060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis		
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus		
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis		
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides		
	060086	ST	IIIa	Sandshell, black	Ligumia recta		
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus		
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
	060168	SE	IIIb	Deertoe	Truncilla truncata		
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		
Clinch River (0261492)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell,	Epioblasma	

			Cumberlandian	brevidens		
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis		
060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra		
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus		
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		
060069	ST	IIIa	Riversnail, spiny	Io fluvialis		
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides		
060086	ST	IIIa	Sandshell, black	Ligumia recta		
060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus		
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus		
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa		
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
060168	SE	IIIb	Deertoe	Truncilla truncata		
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		
Clinch River (0262027)	FESE	010076	ST IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST Ic	Chub, slender	Erimystax cahni	
		010331	FTST Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE Ib	Spectaclecase	Cumberlandia	

					monodonta		
060027	SE	IIIa	Elephantear	<i>Elliptio crassidens</i>			
060030	FESE	Ia	Combshell, Cumberlandian	<i>Epioblasma brevidens</i>			
060031	FESE	Ia	Mussel, oyster	<i>Epioblasma capsaeformis</i>			
060035	FESE	Ia	Mussel, snuffbox	<i>Epioblasma triquetra</i>			
060051	FESE	Ia	Pigtoe, finerayed	<i>Fusconaia cuneolus</i>			
060052	FESE	Ia	Pigtoe, shiny	<i>Fusconaia cor</i>			
060069	ST	IIIa	Riversnail, spiny	<i>Io fluvialis</i>			
060083	FESE	IIa	Pearlymussel, slabside	<i>Pleuronaia dolabelloides</i>			
060086	ST	IIIa	Sandshell, black	<i>Ligumia recta</i>			
060110	FESE	IIa	Mussel, sheepnose	<i>Plethobasus cyphyus</i>			
060121	FESE	IIa	Kidneyshell, fluted	<i>Ptychobranchus subtentus</i>			
060122	FESE	Ia	Rabbitsfoot, rough	<i>Theliderma cylindrica</i>			
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	<i>Theliderma sparsa</i>			
060147	FESE	Ia	Bean, Purple	<i>Villosa perpurpurea</i>			
060163	ST	IVc	Papershell, fragile	<i>Leptodea fragilis</i>			
060168	SE	IIIb	Deertoe	<i>Truncilla truncata</i>			
060169	FESE	Ia	Bean, Tennessee	<i>Venustaconcha trabalis</i>			
Clinch River (0262725)	FESE	010076	ST	IVc	Shiner, emerald	<i>Notropis atherinoides</i>	Yes
		010111	FTST	Ic	Chub, slender	<i>Erimystax cahni</i>	
		010331	FTST	Ia	Madtom, yellowfin	<i>Noturus flavipinnis</i>	
		010335	ST	IIIc	Shiner, steelcolor	<i>Cyprinella whipplei</i>	
		010433	ST	IIb	Darter, golden	<i>Etheostoma denoncourti</i>	
		060020	FESE	Ia	Pearlymussel, birdwing	<i>Lemiox rimosus</i>	

	060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta		
	060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis		
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus		
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis		
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides		
	060086	ST	IIIa	Sandshell, black	Ligumia recta		
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus		
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
	060168	SE	IIIb	Deertoe	Truncilla truncata		
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		
Clinch River (0263631)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	

	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
	060086	ST	IIIa	Sandshell, black	Ligumia recta	
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
	060168	SE	IIIb	Deertoe	Truncilla truncata	
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Clinch River (0263815)	FESE	010076	ST	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Chub, slender	Erimystax cahni	
		010331	FTST	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Spectaclecase	Cumberlandia monodonta	
		060027	SE	Elephantear	Elliptio crassidens	
		060030	FESE	Combshell, Cumberlandian	Epioblasma brevidens	

	060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
	060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
	060086	ST	IIIa	Sandshell, black	Ligumia recta	
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
	060168	SE	IIIb	Deertoe	Truncilla truncata	
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Clinch River (0265044)	FESE	010076	ST	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Chub, slender	Erimystax cahni	
		010331	FTST	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Spectaclecase	Cumberlandia monodonta	

	060027	SE	IIIa	Elephantear	Elliptio crassidens	
	060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
	060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
	060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
	060086	ST	IIIa	Sandshell, black	Ligumia recta	
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
	060168	SE	IIIb	Deer toe	Truncilla truncata	
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha tratalis	
Clinch River (0265296)	FESE	010076	ST	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Chub, slender	Erimystax cahni	
		010331	FTST	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	Darter, golden	Etheostoma denoncourtii	

	060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
	060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
	060027	SE	IIIa	Elephantear	Elliptio crassidens	
	060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
	060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
	060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
	060086	ST	IIIa	Sandshell, black	Ligumia recta	
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
	060168	SE	IIIb	Deertoe	Truncilla truncata	
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Clinch River (0268200)	FESE	010076	ST	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Chub, slender	Erimystax cahni	
		010331	FTST	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	Darter, golden	Etheostoma	

					denoncourtii		
060020	FESE	Ia	Pearlymussel, birdwing.	Lemiox rimosus			
060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta			
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis			
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus			
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor			
060069	ST	IIIa	Riversnail, spiny	Io fluvialis			
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides			
060086	ST	IIIa	Sandshell, black	Ligumia recta			
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus			
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica			
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea			
060163	ST	IVc	Papershell, fragile	Leptodea fragilis			
060168	SE	IIIb	Deertoe	Truncilla truncata			
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis			
Weaver Creek (0258405)	SE	060027	SE	IIIa	Elephantear	Elliptio crassidens	Yes

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Habitat Predicted for Aquatic WAP Tier I & II Species (10 Reaches)

[View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species](#)

Stream Name	Highest TE*	Tier Species				View Map
		BOVA Code, Status *, Tier **, Common & Scientific Name				
Clinch River (60102051)	FESE	010075		IIc	Shiner, popeye	Notropis ariommus
		010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010332			Darter, Tippecanoe	Etheostoma tippecanoe
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010341		IIa	Logperch, blotchside	Percina burtoni
		010342	FPST	Ic	Darter, sickle	Percina williamsi
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
		060027	SE	IIIa	Elephantear	Elliptio crassidens
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
		060034	FESE		Blossom, green	Epioblasma gubernaculum
		060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis
		060082	FESE	Ib	Pearlymussel, cracking	Hemistena lata
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus

				subtentus	
060122	FESE	Ia	Rabbitsfoot, rough	<i>Theliderma cylindrica</i>	
060123	FESE	Ia	Monkeyface (pearlymussel), Cumberland	<i>Theliderma intermedia</i>	
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	<i>Theliderma sparsa</i>	
060147	FESE	Ia	Bean, Purple	<i>Villosa perpurpurea</i>	
060163	ST	IVc	Papershell, fragile	<i>Leptodea fragilis</i>	
060168	SE	IIIb	Deertoe	<i>Truncilla truncata</i>	
060169	FESE	Ia	Bean, Tennessee	<i>Venustaconcha trabalis</i>	
Clinch River (60102051)	FESE				Yes
010075		IIc	Shiner, popeye	<i>Notropis ariommus</i>	
010076	ST	IVc	Shiner, emerald	<i>Notropis atherinoides</i>	
010111	FTST	Ic	Chub, slender	<i>Erimystax cahni</i>	
010331	FTST	Ia	Madtom, yellowfin	<i>Noturus flavipinnis</i>	
010332			Darter, Tippecanoe	<i>Etheostoma tippecanoe</i>	
010335	ST	IIIc	Shiner, steelcolor	<i>Cyprinella whipplei</i>	
010341		IIa	Logperch, blotchside	<i>Percina burtoni</i>	
010342	FPST	Ic	Darter, sickle	<i>Percina williamsi</i>	
060020	FESE	Ia	Pearlymussel, birdwing	<i>Lemiox rimosus</i>	
060021	FESE	Ib	Spectaclecase	<i>Cumberlandia monodonta</i>	
060027	SE	IIIa	Elephantear	<i>Elliptio crassidens</i>	
060031	FESE	Ia	Mussel, oyster	<i>Epioblasma capsaeformis</i>	
060034	FESE		Blossom, green	<i>Epioblasma gubernaculum</i>	

	060050		Ia	Pigtoe, Tennessee	Pleuronaia barnesiana	
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
	060086	ST	IIIa	Sandshell, black	Ligumia recta	
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
	060123	FESE	Ia	Monkeyface (pearlymussel), Cumberland	Theliderma intermedia	
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
	060168	SE	IIIb	Deertoe	Truncilla truncata	
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Monk Branch (60102051)		010449		Ia Dace, Clinch	Chrosomus sp. cf. saylori	Yes
Rocky Fork (60102051)	SE	010449		Ia Dace, Clinch	Chrosomus sp. cf. saylori	Yes
		060050		IIa Pigtoe, Tennessee	Pleuronaia barnesiana	
		060080	SE	IIa Heelsplitter, Tennessee	Lasmigona holstonia	
Rocky Fork (60102051)		010449		Ia Dace, Clinch	Chrosomus sp. cf. saylori	Yes
Thompson Creek (60102051)	FESE	060050		IIa Pigtoe, Tennessee	Pleuronaia barnesiana	Yes
		060080	SE	IIa Heelsplitter, Tennessee	Lasmigona holstonia	

		060121	FESE	Ia	Kidneyshell, fluted	Ptychobranchus subtentus	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
Thompson Creek (60102051)	FESE	060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	Yes
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
tributary (60102051)		010449		Ia	Dace, Clinch	Chrosomus sp. cf. saylori	Yes
Weaver Creek (60102051)	FESE	010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	Yes
		060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
Weaver Creek (60102051)	FESE	060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	Yes
		060080	SE	IIa	Heelsplitter, Tennessee	Lasmigona holstonia	
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
Weaver Creek (60102051)	FESE	060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	Yes
		060080	SE	IIa	Heelsplitter, Tennessee	Lasmigona holstonia	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	

Habitat Predicted for Terrestrial WAP Tier I & II Species

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
020011		IIa	Frog, mountain chorus	Pseudacris brachyphona	Yes

Public Holdings: (1 names)

Name	Agency	Level
Cleveland Barrens State Natural Area Preserve	VA Dept. of Conservation and Recreation	State

Compiled on 4/22/2021, 2:54:41 PM I1091130.0 report=IPA searchType= R dist= 3218 poi= 36.9528250 -82.1398775

PixelSize=64; Anadromous=0.018565; BECAR=0.017244; Bats=0.017187; Buffer=0.060187; County=0.046514; Impediments=0.015134; Init=0.084461; PublicLands=0.020262; SppObs=0.238365; TEWaters=0.026681; TierReaches=0.040977; TierTerrestrial=0.052132; Total=0.793191; Tracking_BOVA=0.19652; Trout=0.01611



Layers: VA Eagle Nest Buffers, VA Eagle Nest Locator

Map Center [longitude, latitude]: [-82.13507652282715, 36.95206957021621]

Map Link:

https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Buffers&layer=VA+Eagle+Nest+Locator&zoom=15&lat=36.95206957021621&lng=-82.13507652282715&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=World+Imagery+%28ESRI%29

Report Generated On: 05/03/2021

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Layers: Eagle Roosts, Eagle Roost Buffers, Eagle Roost Polygons

Map Center [longitude, latitude]: [-82.13507652282715, 36.95206957021621]

Map Link:

https://ccbbirds.org/maps/#layer=Eagle+Roosts&layer=Eagle+Roost+Buffers&layer=Eagle+Roost+Polygons&zoo_m=15&lat=36.95206957021621&lng=-82.13507652282715&legend=legend_tab_59557df6-c07b-11e5-a485-0e31c9be1b51&base=World+Imagery+%28ESRI%29

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Report generated by [The Center for Conservation Biology Mapping Portal](#).

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Appendix III-A
Owens and TNC Parcels
Cultural Resources Search Results

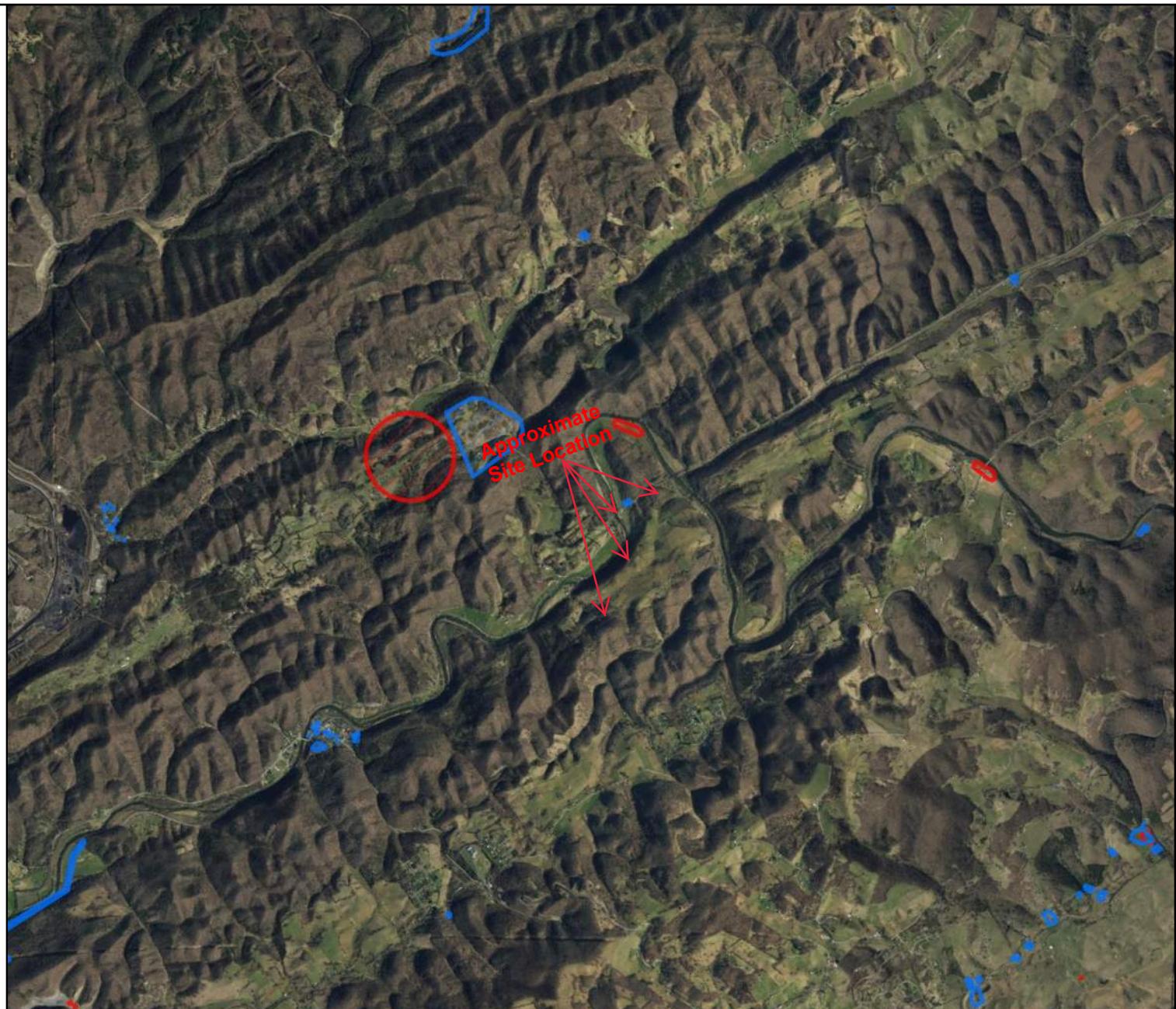
Legend

- Architecture Resources
- Individual Historic District Properties
- Archaeological Resources
- DHR Easements
- County Boundaries



Feet

0 1200 2400 3600 4800
1:72,224 / 1"=6,019 Feet

**Title:****Date: 4/22/2021**

***DISCLAIMER:**Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years from a variety of sources and the representation depicted is a cumulative view of field observations over time and may not reflect current ground conditions. The map is for general information purposes and is not intended for engineering, legal or other site-specific uses. Map may contain errors and is provided "as-is". More information is available in the DHR Archives located at DHR's Richmond office.*

Notice if AE sites:Locations of archaeological sites may be sensitive the National Historic Preservation Act (NHPA), and the Archaeological Resources Protection Act (ARPA) and Code of Virginia §2.2-3705.7 (10). Release of precise locations may threaten archaeological sites and historic resources.

Property Information

Property Names

Name Explanation Function/Location
Current Single Dwelling, Route 661
David Musick House

Property Evaluation Status

Not Evaluated

Property Addresses

Current - Route 661

County/Independent City(s): Russell (County)

Incorporated Town(s): *No Data*

Zip Code(s): *No Data*

Magisterial District(s): *No Data*

Tax Parcel(s): *No Data*

USGS Quad(s): LEBANON

Additional Property Information

Architecture Setting: Rural

Acreage: *No Data*

Site Description:

July 2008: The David Musick House is a southerly-facing dwelling located on the northerly side of Route 661. The dwelling is sited slightly above grade with a small setback from the main road. A concrete walkway approaches the façade porch from the roadway. A few shrubs grow along the foundation. A large conifer shades the westerly side of the dwelling, and a thick line of trees defines the rear edge of the lot.

July 2008: A garage is located to the east of the dwelling.

Surveyor Assessment:

July 2008: Early settlement began in southwestern Virginia around 1750 as colonists moved westward from the coastal regions into the interior of the state and Scotch-Irish, English, and German immigrants moved south over the Wagon Road from Pennsylvania into North Carolina. Settlement focused along the waterways and upland mountain ridges, as pioneers constructed simple log dwellings and established small farms. Russell County was officially formed out of Washington County in 1786, with the first county seat located in the Castlewood area. In contrast to the vast plantations of the Tidewater region of the state, the economy of the Appalachian region was largely subsistence based and supplemented by livestock and wool for market commodities. While the county was known for its prime tobacco, cattle farming gained dominance through the nineteenth century and into the twentieth century. Agricultural prosperity allowed the expansion of modest log dwellings into larger I-houses, which merged the vernacular traditions of the immigrant settlers with the classically-inspired forms of the high styles. The early waterways and wagon roads of the county were trumped by the construction of two railroads during the late nineteenth and early twentieth centuries. The subsequent lumber and coal mining industries, as well as access to the larger market economy, brought a surge of industrial prosperity at the turn-of-the-century. Company towns soon swelled within the hollows and valleys, bringing another large influx of immigrant workers from such regions as Italy, Yugoslavia, and Hungary. Churches, schools, and local commercial enterprises were established on a large scale as populations grew and new communities formed. Growth continued to flourish into the 1930s, and in some regions the 1950s, at which time the bulk of the mining and lumber companies shut down, leaving Russell County to its early agricultural roots.

This circa 1850 dwelling is an excellent example of the numerous vernacular I-houses that proliferated throughout Russell County during the nineteenth century. The symmetrical, two-story, side-gable massing and rear ell embody the distinct characteristics of I-house construction. The dwelling stands as a reminder of the community of Artrip as it was in the pre-railroad days.

Surveyor Recommendation: *No Data*

Ownership

Ownership Category Private **Ownership Entity** *No Data*

Primary Resource Information

Resource Category: Domestic

Resource Type: Single Dwelling

NR Resource Type: Building

Historic District Status: *No Data*

Date of Construction: Ca 1850

Date Source: Site Visit
Historic Time Period: Antebellum Period (1830 - 1860)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: Vernacular
Form: I-House
Number of Stories: 2.0
Condition: Good
Threats to Resource: None Known

Architectural Description:

July 2008: The David Musick House is a vernacular, two-story, three-bay, single-pile, pedimented, side-gable, wood-frame I-house, clad in vinyl siding, topped with a standing-seam metal roof, and resting on a solid, parged foundation. A single-leaf door is centered on the symmetrically-ordered façade. A one-story, hipped-roof, wood porch, supported by battered wood columns and raised on a poured-concrete foundation, spans the first-story façade. Fenestration consists of wood, two-over-two, double-hung sash windows, all of which are covered with aluminum storm sashes and framed by vinyl architraves. A large, shouldered, brick chimney, with a corbelled cap, abuts the easterly elevation. A smaller, brick, interior chimney, with an arched cap, rises from the ridgeline of the roof. Pediments frame the gable peaks on the side elevations.

Additions and alterations: A one-story, gable-roof, wood-frame ell, which is also clad in vinyl siding, extends off the rear of the main dwelling. The vinyl siding and aluminum storm sashes likely date from the late twentieth century. The Craftsman-style porch was likely added during the early twentieth century.

Exterior Components

Component	Component Type	Material	Material Treatment
Windows	Sash, Double-Hung	Wood	2/2
Roof	Gable, Side	Metal	Standing Seam
Chimneys	Interior	Brick	Cap, Corbeled
Structural System and Exterior Treatment	Frame	Vinyl	Siding, Vinyl
Foundation	Solid/Continuous	Other	Parged
Porch	1-story, 3-bay	Wood	Columns

Secondary Resource Information

Secondary Resource #1

Resource Category: Domestic
Resource Type: Garage
Date of Construction: 1950Ca
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Architectural Style: No Discernable Style
Form: *No Data*
Condition: Fair
Threats to Resource: None Known
Architectural Description:

July 2008: A gable-roof, concrete-block garage is located to the east of the main dwelling. A four-light, paneled, overhead door opens into the facade of the garage.

Number of Stories: 1

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*
Investigator: Andre, Elizabeth
Organization/Company: Unknown (DSS)
Photographic Media: *No Data*
Survey Date: 7/1/2008
Dhr Library Report Number: *No Data*

Project Staff/Notes:

The survey of Russell County was conducted by Elizabeth Andre, Architectural Historian with the William and Mary Center for Archaeological Research, as part of the Virginia Department of Historic Resources 2007-2008 Cost-Share Survey Program.

Project Bibliographic Information:

Name: Russell County Heritage Book Committee, -
Record Type: Book
Bibliographic Notes: The Heritage of Russell County. Marceline, MO: Walsworth Publishing Company, 1986.

Bibliographic Information

Bibliography:

No Data

Property Notes:

No Data

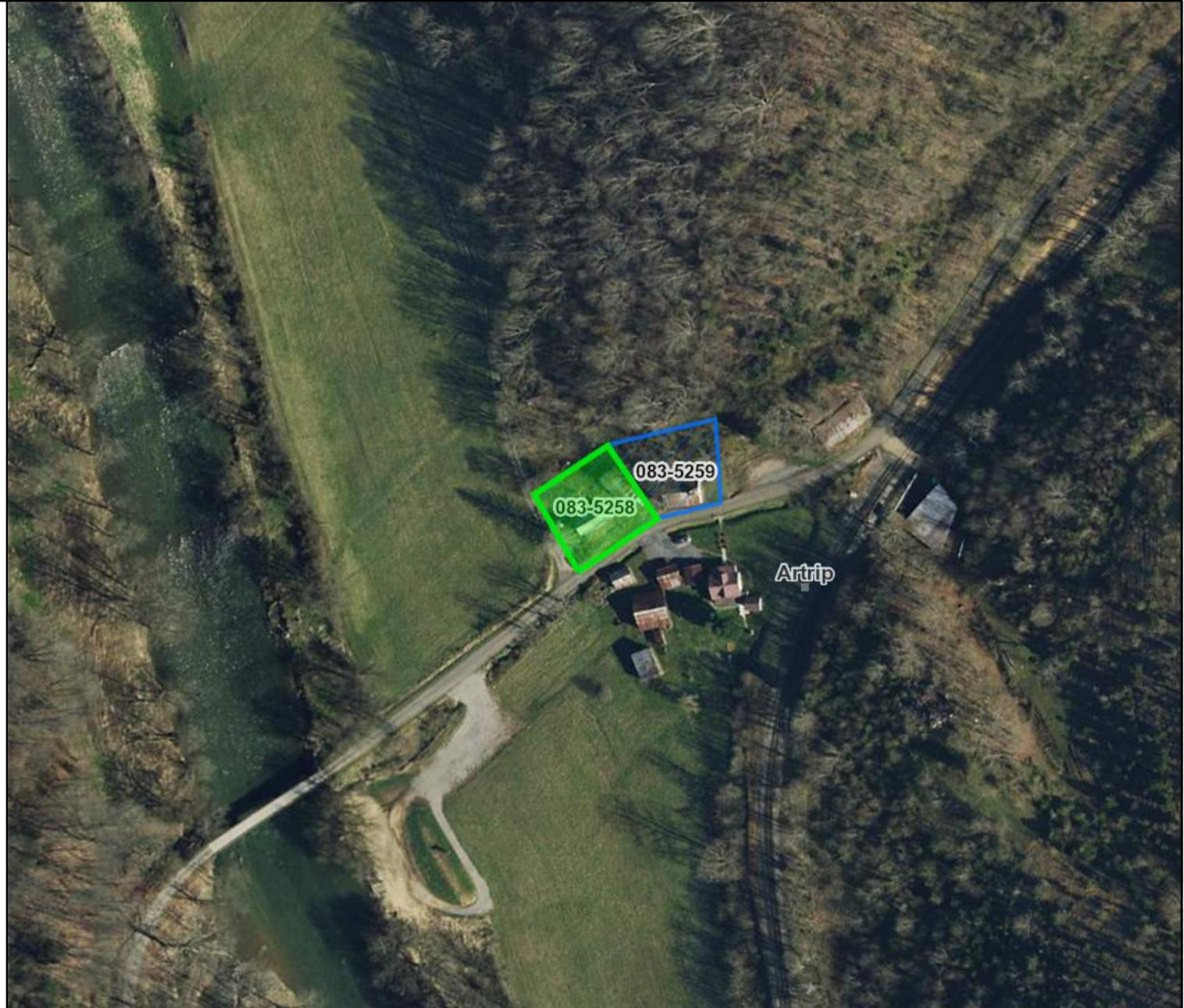
Legend

- Architecture Resources
- Architecture Labels
- Individual Historic District Properties
- Archaeological Resources
- Archaeology Labels
- DHR Easements
- USGS GIS Place names
- County Boundaries



Feet

0 50 100 150 200
1:2,500 / 1"=208 Feet

**Title: Architecture Labels****Date: 4/22/2021**

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Notice if AE sites:Locations of archaeological sites may be sensitive the National Historic Preservation Act (NHPA), and the Archaeological Resources Protection Act (ARPA) and Code of Virginia §2.2-3705.7 (10). Release of precise locations may threaten archaeological sites and historic resources.

Property Information

Property Names

Name Explanation
Function/Location
Historic/Current

Name
Church, Route 661
Artrip Baptist Church

Property Evaluation Status

Not Evaluated

Property Addresses

Current - Route 661

County/Independent City(s): Russell (County)

Incorporated Town(s): *No Data*

Zip Code(s): *No Data*

Magisterial District(s): *No Data*

Tax Parcel(s): *No Data*

USGS Quad(s): LEBANON

Additional Property Information

Architecture Setting: Rural

Acreage: *No Data*

Site Description:

July 2008: Artrip Baptist Church is an easterly-facing building located on the westerly side of Route 661. The building is sited at grade with a minimal setback from the road. A thick forest grows to the north side of the church.

July 2008: There are no visible secondary resources associated with this property.

Surveyor Assessment:

July 2008: Early settlement began in southwestern Virginia around 1750 as colonists moved westward from the coastal regions into the interior of the state and Scotch-Irish, English, and German immigrants moved south over the Wagon Road from Pennsylvania into North Carolina. Settlement focused along the waterways and upland mountain ridges, as pioneers constructed simple log dwellings and established small farms. Russell County was officially formed out of Washington County in 1786, with the first county seat located in the Castlewood area. In contrast to the vast plantations of the Tidewater region of the state, the economy of the Appalachian region was largely subsistence based and supplemented by livestock and wool for market commodities. While the county was known for its prime tobacco, cattle farming gained dominance through the nineteenth century and into the twentieth century. Agricultural prosperity allowed the expansion of modest log dwellings into larger I-houses, which merged the vernacular traditions of the immigrant settlers with the classically-inspired forms of the high styles. The early waterways and wagon roads of the county were trumped by the construction of two railroads during the late nineteenth and early twentieth centuries. The subsequent lumber and coal mining industries, as well as access to the larger market economy, brought a surge of industrial prosperity at the turn-of-the-century. Company towns soon swelled within the hollows and valleys, bringing another large influx of immigrant workers from such regions as Italy, Yugoslavia, and Hungary. Churches, schools, and local commercial enterprises were established on a large scale as populations grew and new communities formed. Growth continued to flourish into the 1930s, and in some regions the 1950s, at which time the bulk of the mining and lumber companies shut down, leaving Russell County to its early agricultural roots.

Upon arriving in Russell County, settlers saw the need to establish religious organizations. The Freewill Baptists, Primitive Baptists, and Methodists dominated the religious sphere, and their congregations continued to grow and flourish through the twentieth century. Churches were not only the religious focus of rural life but also formed the social and cultural identity of the community. The modest structures epitomized the ideals of the vernacular language, as their building forms showed little to no consideration for popular architectural styles, their materials were often culled from local farms or mountains, and community members donated their time and labor to erect the small chapels. The alterations that a vast number of the rural churches have undergone over the past century or more are part of the evolving physical fabric of the vernacular design and materials that largely mark both the county and the greater Appalachian region and are a visual representation of the continuous adaptation of the religious life to the needs and values of the community.

Constructed around 1930, Artrip Baptist Church is an excellent, well-preserved example of the numerous vernacular churches constructed in the early twentieth century throughout Russell County. Notable are the modest, nave-plan massing; transom lights; and small cupola. The church also stands as a dwindling reminder of the community of Artrip.

Surveyor Recommendation: *No Data*

Ownership

Ownership Category
Private

Ownership Entity
No Data

Primary Resource Information

Resource Category:	Religion
Resource Type:	Church/Chapel
NR Resource Type:	Building
Historic District Status:	No Data
Date of Construction:	Ca 1930
Date Source:	Site Visit/Written Data
Historic Time Period:	World War I to World War II (1917 - 1945)
Historic Context(s):	Religion, Social
Other ID Number:	No Data
Architectural Style:	Craftsman
Form:	No Data
Number of Stories:	1.0
Condition:	Poor
Threats to Resource:	Deterioration, Neglect, Vacant

Architectural Description:

July 2008: Artrip Baptist Church is a Craftsman-style, one-story, one-by-three-bay, gable-roof, wood-frame building, sheathed in weatherboard, topped with a standing-seam metal roof, and resting on a concrete-block foundation. A single-leaf, wood, paneled door, flanked by blind sidelights, topped with a four-light transom, and framed by a wood architrave molding, is centered on the façade. Wood, six-over-six, double-hung sash windows, also framed by wood architrave moldings, line the side elevations. A square cupola, which is topped with a tall, tapering, conical roof, rises from the front gable peak of the wood. Rectangular louvered lights open into all sides of the cupola. A peaked louvered light is centered in the rear gable peak. Rafter tails are exposed beneath the raking eaves of the main roof and the flared, raking eaves of the cupola roof. A brick chimney, with a corbelled cap, is centered on the ridgeline of the roof.

Additions and alterations: The main door appears to be a fairly recent replacement of the original door, and the sidelights have been covered over.

Exterior Components

Component	Component Type	Material	Material Treatment
Windows	Sash, Double-Hung	Wood	6/6
Roof	Gable, Front	Metal	Standing Seam
Foundation	Solid/Continuous	Concrete	Block
Chimneys	Central interior	Brick	Cap, Corbeled
Structural System and Exterior Treatment	Frame	Wood	Weatherboard

Secondary Resource Information

Historic District Information

Historic District Name:	No Data
Local Historic District Name:	No Data
Historic District Significance:	No Data

CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number:	No Data
Investigator:	Andre, Elizabeth
Organization/Company:	Unknown (DSS)
Photographic Media:	No Data
Survey Date:	7/1/2008
Dhr Library Report Number:	No Data
Project Staff/Notes:	

The survey of Russell County was conducted by Elizabeth Andre, Architectural Historian with the William and Mary Center for Archaeological Research, as part of the Virginia Department of Historic Resources 2007-2008 Cost-Share Survey Program.

Project Bibliographic Information:

Name: Russell County Heritage Book Committee, -
Record Type: Book
Bibliographic Notes: The Heritage of Russell County. Marceline, MO: Walsworth Publishing Company, 1986.

Bibliographic Information

Bibliography:

No Data

Property Notes:

No Data

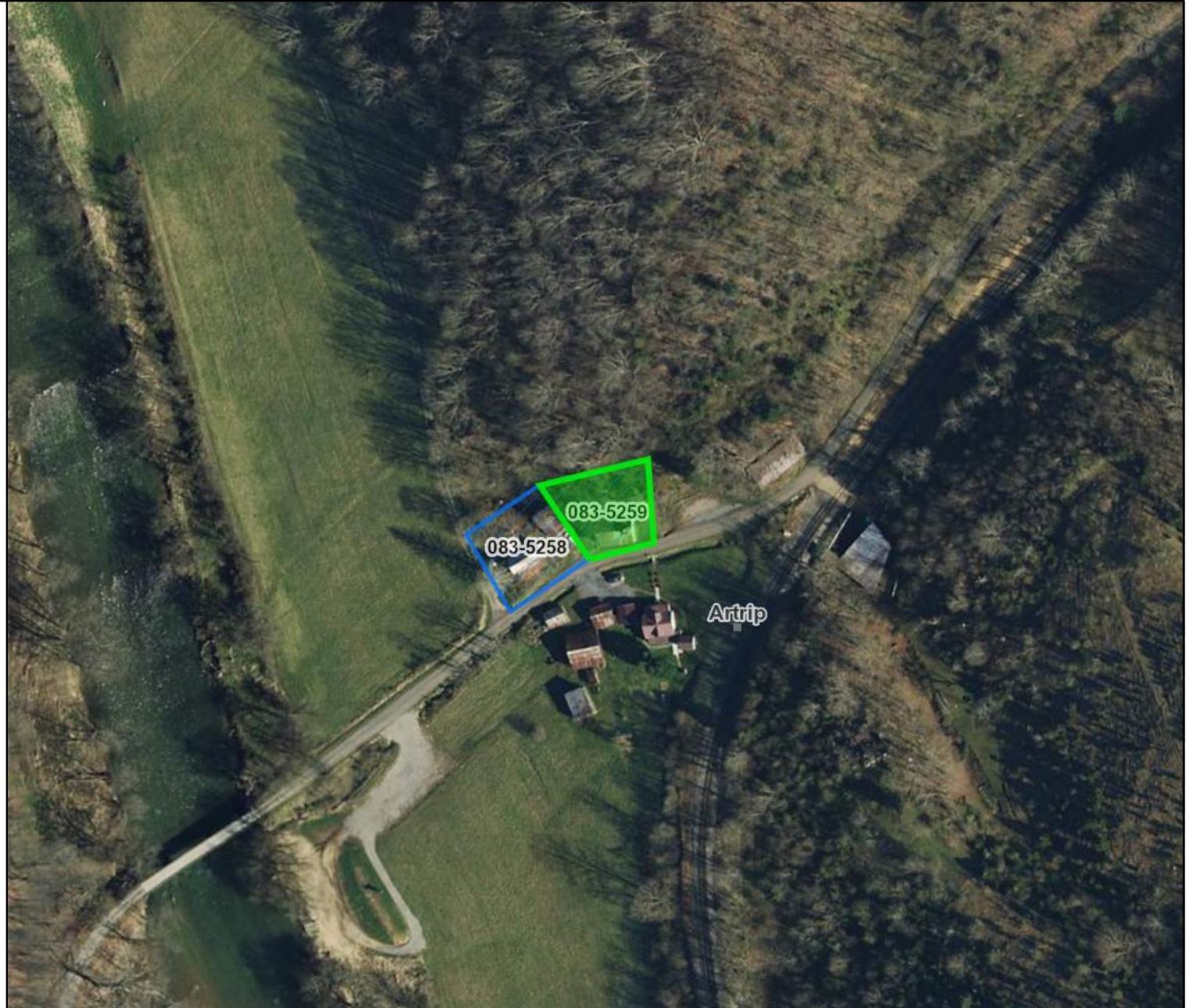
Legend

- Architecture Resources
- Architecture Labels
- Individual Historic District Properties
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- USGS GIS Place names
- County Boundaries



Feet

0 50 100 150 200
1:2,500 / 1"=208 Feet

**Title: Architecture Labels****Date: 4/22/2021**

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Notice if AE sites: Locations of archaeological sites may be sensitive the National Historic Preservation Act (NHPA), and the Archaeological Resources Protection Act (ARPA) and Code of Virginia §2.2-3705.7 (10). Release of precise locations may threaten archaeological sites and historic resources.

**Appendix III-B
McIntyre Parcel
Cultural Resources Search Results**

Legend

- Architecture Resources
- Architecture Labels
- Individual Historic District Properties
- Archaeological Resources
- Archaeology Labels
- DHR Easements
- USGS GIS Place names
- County Boundaries



Feet

0 500 1000 1500 2000
1:18,056 / 1"=1,505 Feet



Title:

Date: 4/22/2021

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Appendix IV

Site Features Map



**CLINCH RIVER
RUSSELL COUNTY PARCELS**



**DESKTOP REVIEW
FIELD NOTES
AUSTIN BROCKENBROUGH**



July 6, 2021

Mr. Bob Polino
Austin Brockenbrough and Associates, LLC
1011 Boulder Springs Drive
Suite 200
Richmond, Virginia 23225

ECS Project No. 47:11947

Reference: Environmental Desktop Review Summary Letter, Clinch River Project – Wise County Parcels, Bull Run Road, Wise County, Virginia

Dear Mr. Polino:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Austin Brockenbrough and Associates (ABA) with the results of the Environmental Desktop Review for the above-referenced project site. Our services were provided in general accordance with ECS Proposal No. 47:18022-PR, dated March 23, 2021.

PROPERTY DESCRIPTION

The study area is located along Bull Run Road in Wise County, Virginia. The property is approximately 472 acres in size, and is comprised of Parcel IDs 073-031, 073-062, 073-063, 073-064, 073-65, 073-67, and 073-68. A majority of the subject property is forested land with an open area in the central to southern portion of the site. The central portion of the site contains a maintenance shed, storage shed, and a cabin. There are several unmarked and marked gravesites in the western portion of the site, as well as the Bickley Cemetery in the open central portion of the site. Various recreational trails are located throughout the subject site.

DATABASE REVIEW FINDINGS

Section 1.0 – Cultural Resources

1.1 Cultural Resources Desktop Review

1.1.1 Virginia Department of Historic Resources (DHR):

ECS reviewed DHR files for historic sites on the Virginia Cultural Resources Information System (VCRIS), other recorded historic sites, and documented archaeological sites. According to the database, the following resources were mapped on or around the subject site limits:

1. Sainte Marie on the Clinch (DHR ID: 097-0186) – this feature is mapped in the central portion of the site near the Bickley Cemetery. The feature is associated with the oldest reported home in Wise County that was owned by Frenchman Francis Pierre De Tubeuf. The site was part of a 55,000-acre tract of land with the home overlooking the Clinch River. The home is in a ruinous condition with only the chimneys remaining. The resource is listed as potentially eligible for listing in the National Register of Historic Places (NRHP) by DHR.
2. DHR ID: 44WS0142 - this feature is mapped in the central portion of the site near the Sainte Marie on the Clinch and Bickley Cemetery sites. The feature is believed to be associated with the double chimneys for the Sainte Marie on the Clinch resources. The resource has not been evaluated by DHR.

3. Austin, Flem House (DHR ID: 097-0187) - this feature is mapped to the west of the northern portion of the subject site. The feature is associated with a shed and barn. The resource has not been evaluated by DHR.

1.2 Cultural Resources Site Reconnaissance

Three structures that appeared to be associated with the historical use of the site were observed in the central portion of the property and a cabin was observed in the western portion of the site. There are several unmarked and marked gravesites in the western portion of the site, as well as the Bickley Cemetery in the open central portion of the site. A chimney was observed in the central portion of the site as well, which may be associated with the St. Marie on the Clinch and DHR ID 44WS0142 resource.

1.3 Cultural Resources Summary

Based on these findings, ECS believes adverse impacts to the archaeological and/or architectural resources on the adjacent properties is low; however, there are potential impacts to resources on the subject site. The Bickley Cemetery and several unmarked gravesites are located on the subject site. Disturbance of any graves is a violation of federal law and would require a permit to relocate interred remains. Additionally, Saint Marie on the Clinch is identified as the oldest home in Wise County. As a result, there is the potential DHR may request additional surveys due to the historical use of the area, the structures on the subject site, the prominence and historical significance of the property, and the cemeteries being present within the site's boundaries. If greater project certainty is required, ECS can submit the project to DHR for their technical assistance with a request asking if additional surveys will be requested prior to development or purchase.

Supporting DHR documentation for the project site is provided in Appendix III and the Site Features Map is provided as Appendix IV.

Section 2.0 – Threatened and Endangered Species

2.1 Threatened and Endangered Species Desktop Review

2.1.1 Department of Wildlife Resources (DWR)

2.1.1.1 Virginia Fish and Wildlife Information Service (VAFWIS):

ECS conducted a search of the Virginia Department of Wildlife Resources (DWR) Fish and Wildlife Information Service (VAFWIS) threatened and endangered species database to evaluate documented occurrences of Federal and/or state listed species within a two-mile radius of the subject site. According to VAFWIS, multiple fish and clam species were identified within a 2-mile radius of the subject site. The Clinch River, which borders the project site, provides suitable habitat for the species listed. Additionally, 3 bats species, Northern Long-eared Bat (federally and state threatened), Little Brown Bat (state endangered), and Tri-colored Bat (state endangered) were identified within a 2-mile radius of the subject site and suitable habitat is present, specifically within the forested portions of the site. These bats species have Data Explorer Databases which were utilized as part of this assessment and additional information is provided in Sections 2.1.1.2 and 2.1.1.3 below.

2.1.1.2 Northern Long-eared Bat (*Myotis septentrionalis*) Habitat and Roost Trees:

A review of the Northern Long-eared bat (NLEB) Habitat and Roost Trees Data Explorer database was completed to evaluate if documented occurrences or potential habitat for the federally threatened NLEB are within the project boundaries. The review identified the subject site is not located within 150-ft of a known occupied maternity roost or within ¼-mi of a known NLEB hibernaculum. However, for greater project certainty, a project review request can be submitted to the USFWS as part of the project review submittal package.

2.1.1.3 Little Brown Bat (*Myotis lucifugus* - MYLU) and Tri-colored Bat (*Perimyotis subflavus* - PESU):

A review of the Little Brown Bat (MYLU)/Tri-colored Bat (PESU) Habitat Data Explorer database was conducted to evaluate if documented occurrences or potential habitat for the state endangered species are within the project boundaries. The review identified the subject site is not located within the ½-mi or 5.5-mi hibernaculum buffer zones. However, for greater project certainty, a project review request can be submitted to the USFWS as part of the project review submittal package.

2.1.2 U.S. Fish and Wildlife Service (USFWS):

ECS conducted a review of the U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC) database to evaluate the documented occurrences or potential habitat for federally-listed species within the project boundaries.

According to USFWS, the Official Species List (OSL) revealed 3 bat species, 19 fish/mussel species associated with the River, and 6 critical habitats within close proximity of the subject site. The six critical habitats are associated with Cumberlandian Combshell (*Epioblasma brevidens*), Fluted Kidneyshell (*Ptychobranchus subtentus*), Oyster Mussel (*Epioblasma capsaeformis*), Purple Bean (*Villosa perpurpurea*), Rough Rabbitsfoot (*Quadrula cylindrica strigillata*), and Slabside Perlymussel (*Pleuronaia dolabelloides*) which are aquatic species associated with the River. Due to the number of species identified on the OSL, ECS believes a project review submission should be submitted to USFWS when project impacts are more refined.

2.1.3 Virginia Department of Conservation and Recreation (DCR):

A review of the VA Natural Heritage Data Explorer database showed two features within or surrounding the project's limits. The Clinch River – Lick Creek/Thompson Creek/Big Cedar Creek Stream Conservation Unit (SCU) (Conservation Site ID: 4497) traverses the northern portion of the site where it drains into the larger Clinch River system that borders the eastern portion and toe of the site. Sugar Hill, a conservation site (Conservation Site ID: 4581), is located in the northern to southern portion of the subject property. Sugar Hill is reported support two significant natural communities and two rare plant populations.

2.1.4 The Center for Conservation Biology

The Center for Conservation Biology's (CCB) mapping tool was utilized to evaluate if bald eagle roosts and/or nests are located within close proximity of the subject site. Bald Eagle nests or roosts were not depicted on the CCB map. The subject site does not fall within a bald eagle nest or roost buffer zone.

Supporting documentation for the Threatened and Endangered Species desktop review is provided in Appendix II.

2.2 Threatened and Endangered Species Site Reconnaissance

The site is comprised of dense forested land with meandering channels, as well as open land located along the Clinch River. Suitable habitat for aquatic species and the bat species that were identified on the database searches is present within the site's limits, specifically within the forested portions of the site.

2.3 Threatened and Endangered Species Summary

Due to the number of species identified on database searches, as well as the site reconnaissance observations, ECS believes a project review submission should be submitted when project impacts are more refined. This will allow a better evaluation of potential adverse impacts to protected species.

Section 3.0 – Wetland and other Environmental Resources Desktop Review

Section 3.1 – Wetland and other Environmental Resources

A review of background information on soils, hydrology, USGS topography, National Wetlands Inventory maps (NWI), aerial photographs, and other relevant online information was conducted to provide preliminary information on locations of wetlands and streams within or around the subject study area. Supporting documentation is provided in Appendix I - Figures.

3.1.1 Topographic Map Review

The subject site falls within the St. Paul, VA quadrangle (Appendix I, Figure II). The topographic map indicates that the site has rolling hills and generally slopes towards the Clinch River. A few structures are depicted in the central portion of the site near the locations of the existing onsite structures and/or historical resources identified on DHR's VCRIS database. Three cemeteries are present on the subject site – Bickley Cemetery (central and eastern portions of the site) and Dye Cemetery (western portion of the subject site). Multiple roadways or trails, as well as the Craigen Tunnel, that appears to be associated with a railroad line, are also depicted on the subject site.

3.1.2 USDA Soil Review

The site is located in the Piedmont Physiographic Region. The site contains twenty-one soil mapping units as indicated by the United States Department of Agriculture (USDA) Natural Resource Conservation Service's (NRCS) Web Soil Survey (Appendix I, Figure III). The only soil unit that is classified as hydric by the NRCS is 35A – Holly silt loam (ponded, 0 to 3 percent slope), which is mapped in the westernmost portion of the site.

3.1.3 National Wetland Inventory (NWI) and FEMA review

The NWI maps depicts a linear stream channel in the northern portion of the site that drains to the Clinch River. The Clinch River borders the eastern portion of the site, as well as the toe of the site. FEMA floodplains are depicted on or around the subject site following the Clinch River. The central portions of the subject site are located outside of a mapped FEMA floodplain (Appendix I, Figure VI).

Section 3.2 – Wetland and other Environmental Resources Site Visit

Multiple wetlands and stream channels were observed throughout the northern portion of the subject site in addition to the Clinch River bordering portions of the subject site. Three cemeteries are present on the subject site in the approximate locations as what is depicted on the topographic map.

Section 3.3 – Wetland and other Environmental Resources Summary

There appears to be jurisdictional WOUS features on portions of the subject site. ECS recommends a WOUS Delineation and U.S. Army Corps of Engineers (USACE) Preliminary Jurisdictional Determination (PJD) to obtain agency agreement on the jurisdictional features and assist in any future project planning and design efforts. A WOUS Delineation and USACE PJD are valid for 5 years following the USACE issuance of the PJD documents. During the PJD's 5-year validity period, a WOUS permit application can be submitted to the regulatory agencies – USACE, Department of Environmental Quality (DEQ), and the Virginia Marine Resources Commission (VMRC) – for impacts to WOUS features, if any are planned.

This completes our scope of service for this project. If you have any questions or comments concerning the contents of the enclosed documents or other related topics, please feel free to contact us at (804) 353-6333.

Respectfully submitted,

ECS MID-ATLANTIC, LLC



Kaelyn Davis, PWS
Senior Project Manager
KDavis1@ecslimited.com



Adam M. Meurer, CHMM, PWS
Vice President, Principal
AMeurer@ecslimited.com

Enclosures: Appendix I – Figures
 Appendix II - Threatened & Endangered Species Search Results
 Appendix III – Historic Resources Search Results
 Appendix IV – Site Features Map

Appendix I

Figures

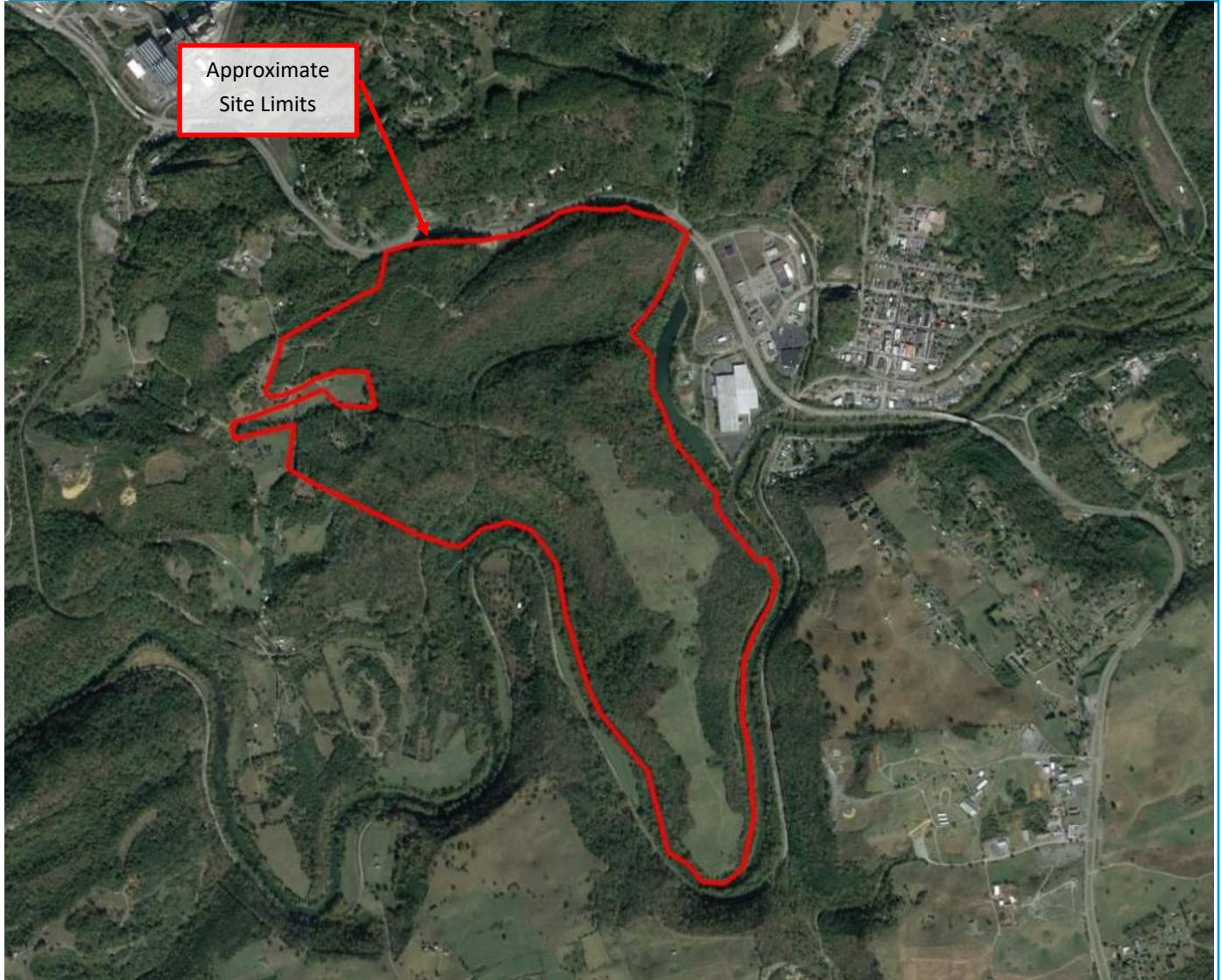
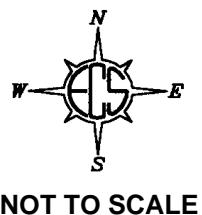


Figure 1: Site Location Map

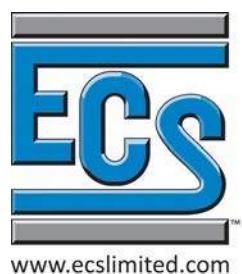
**Project #47:11947 Clinch River—Wise County Parcels
Wise County, Virginia**



NOT TO SCALE

ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
MAY 2021
SOURCE: GOOGLE EARTH

ECS MID-ATLANTIC, LLC
2119 NORTH HAMILTON ST
RICHMOND, VA 23230
804-353-6333



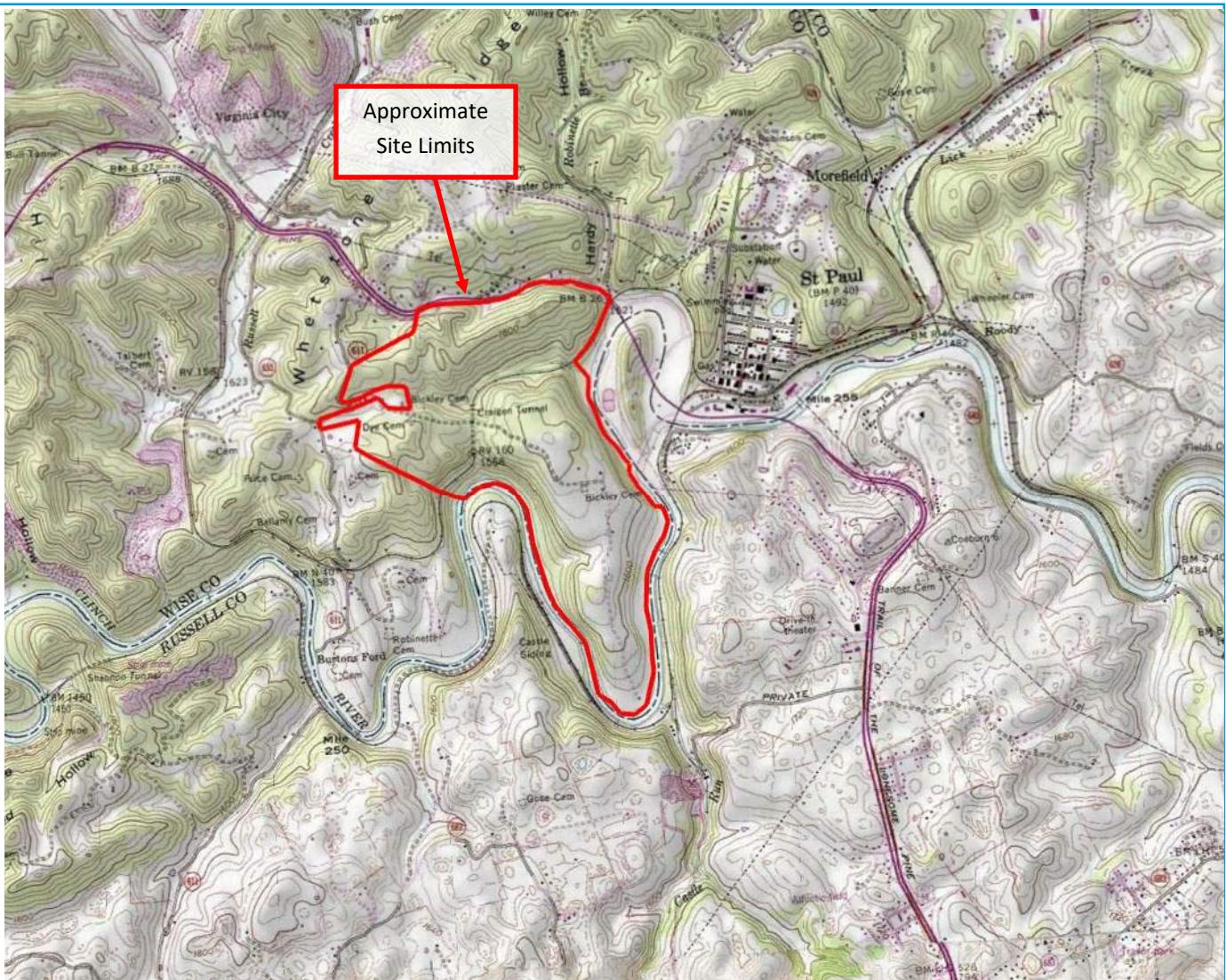
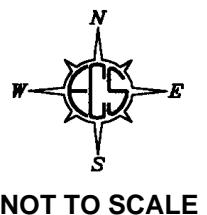


Figure 2: USGS Topographic Map
Project #47:11947 Clinch River—Wise County Parcels
Wise County, Virginia



NOT TO SCALE

ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
APRIL 2021
SOURCE: THE USGS STORE

ECS MID-ATLANTIC, LLC
2119 NORTH HAMILTON ST
RICHMOND, VA 23230
804-353-6333



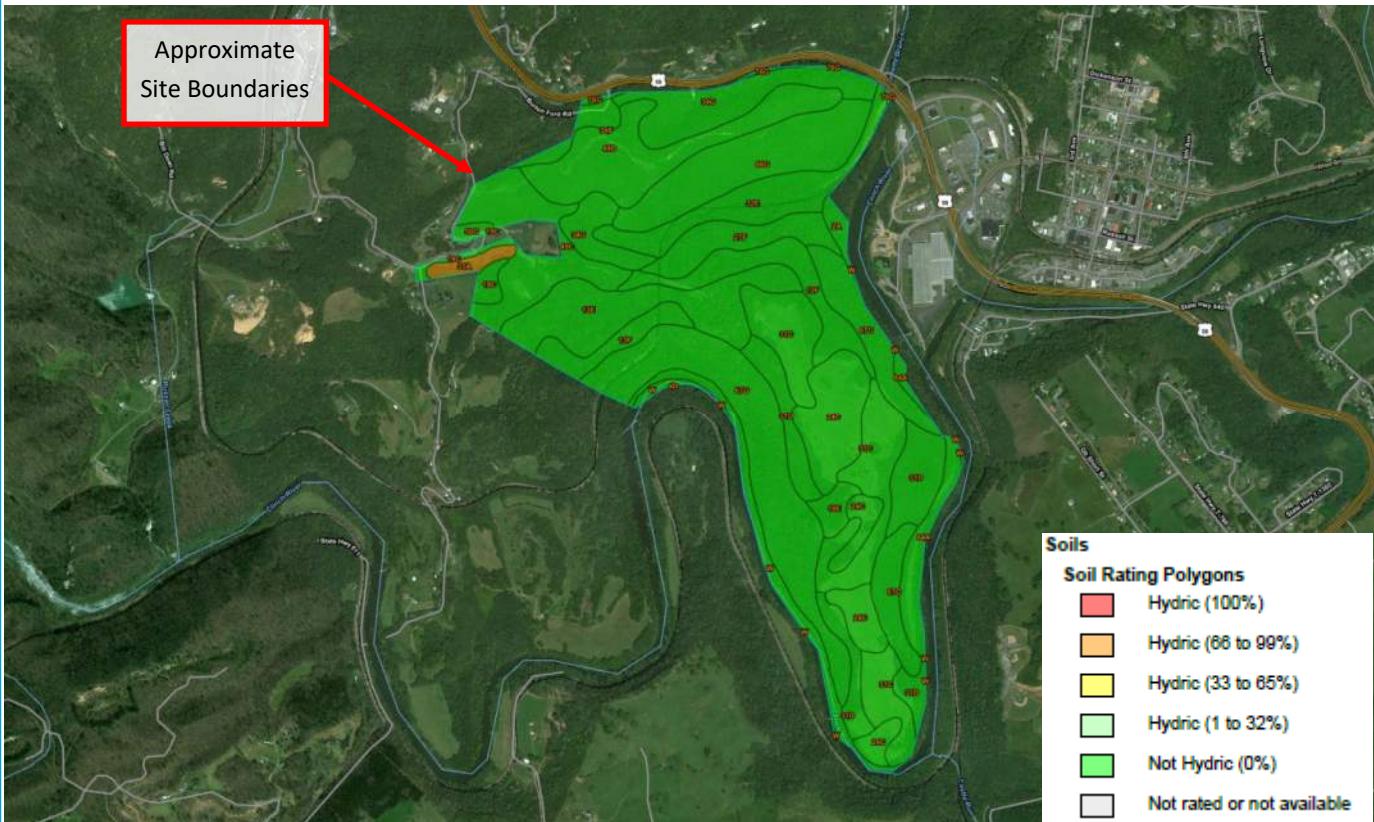
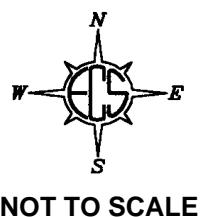


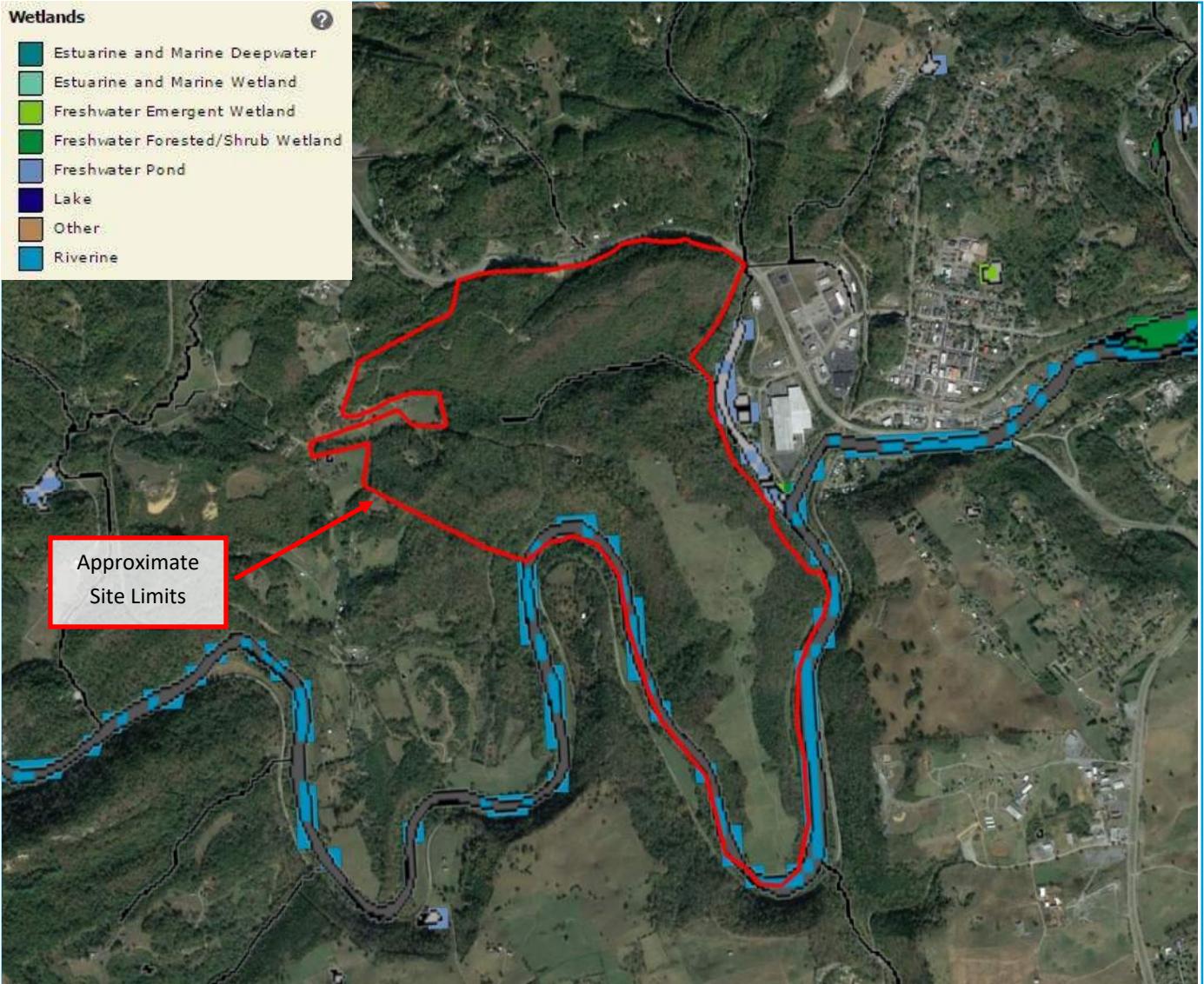
Figure 3: USDA Soils Map
Project #47:11947 Clinch River—Wise County Parcels
Wise County, Virginia



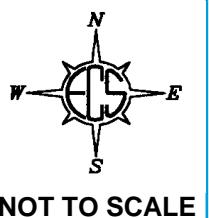
ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
APRIL 2021
SOURCE: NRCS WEB SOIL SURVEY

ECS MID-ATLANTIC, LLC
2119 NORTH HAMILTON ST
RICHMOND, VA 23230
804-353-6333





**Figure 4: National Wetlands Inventory Map
Project #47:11947 Clinch River—Wise County Parcels
Wise County, Virginia**



ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
APRIL 2021
SOURCE: USFWS WETLANDS MAPPER

ECS MID-ATLANTIC, LLC
2119 NORTH HAMILTON ST
RICHMOND, VA 23230
804-353-6333



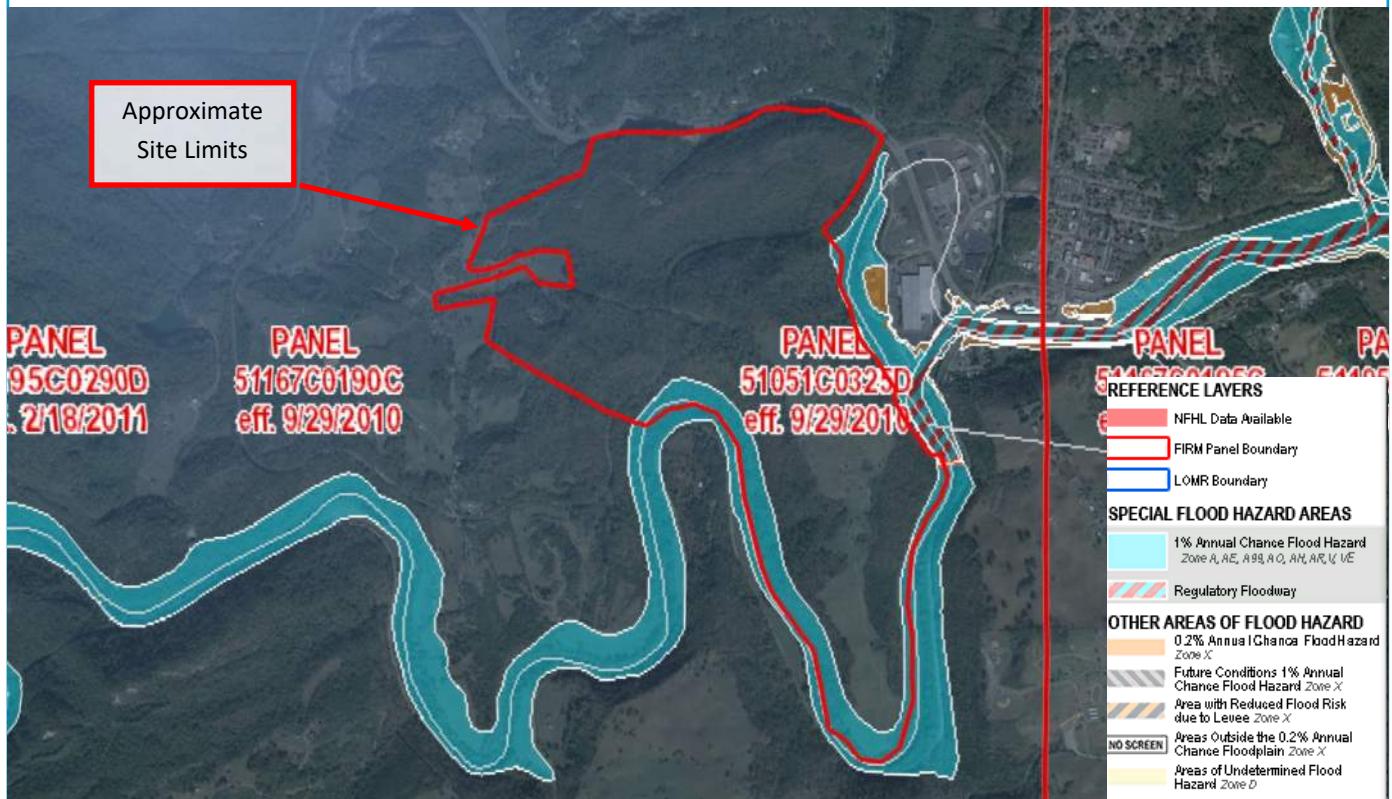
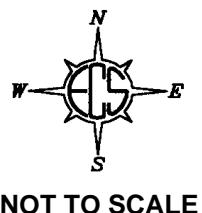


Figure 5: FEMA Floodplain Map
Project #47:11947 Clinch River—Wise County Parcels
Wise County, Virginia



ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
APRIL 2021
SOURCE: FEMA

ECS MID-ATLANTIC, LLC
2119 NORTH HAMILTON ST
RICHMOND, VA 23230
804-353-6333



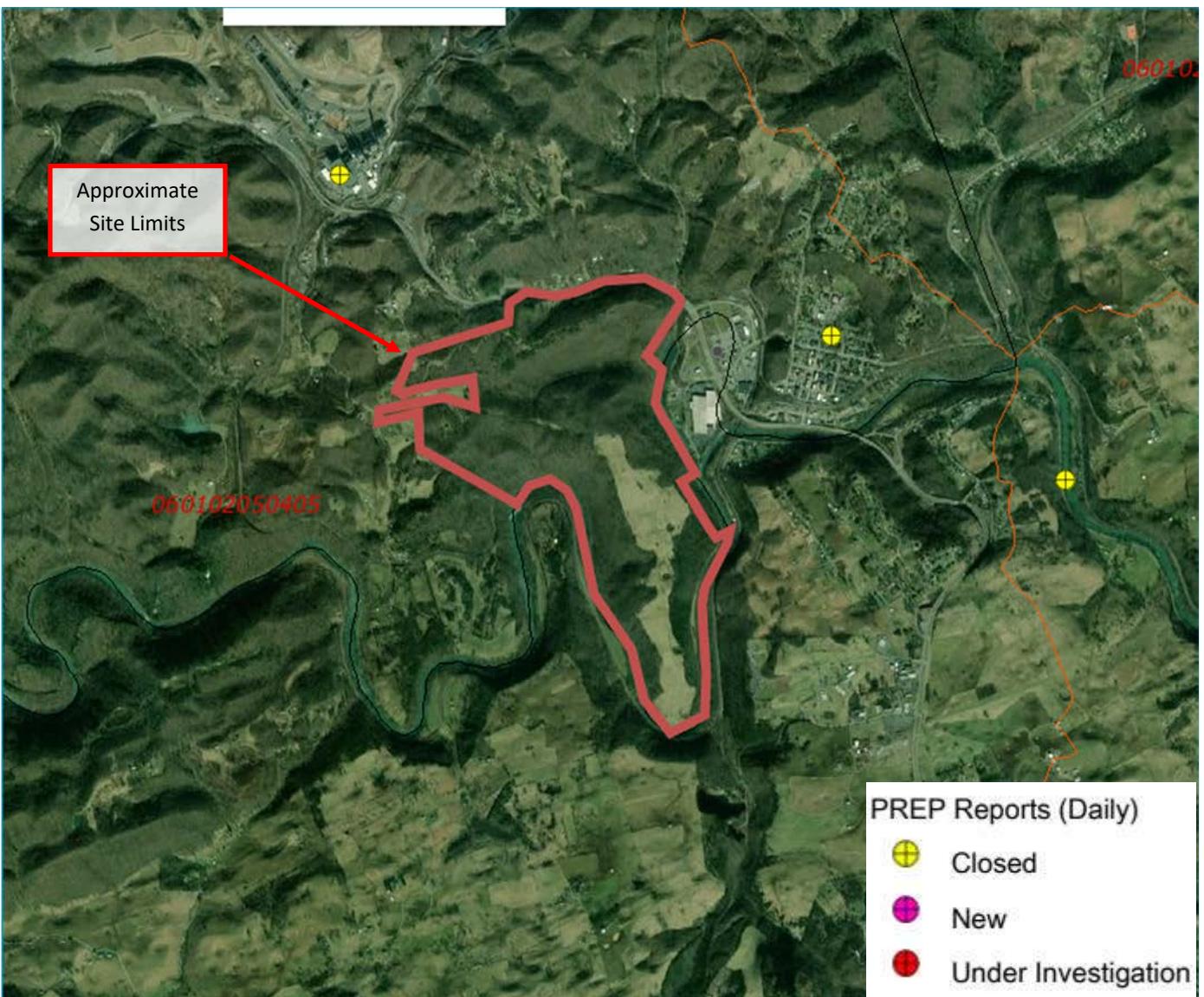
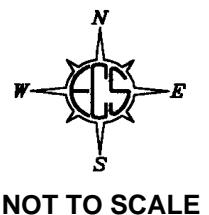


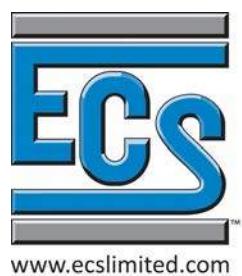
Figure 6: DEQ Records Review

**Project #47:11947 Clinch River—Wise County Parcels
Wise County, Virginia**



ENVIRONMENTAL DESKTOP REVIEW
FOR: AUSTIN BROCKENBROUGH
APRIL 2021
SOURCE: DEQ PREP MAPPER

ECS MID-ATLANTIC, LLC
2119 NORTH HAMILTON ST
RICHMOND, VA 23230
804-353-6333



Appendix II

Threatened & Endangered Species Search Results

USFWS and DWR Database Results

Site Name	Agency	Category	Status	Species Name	Common Name	USFWS Critical Habitat	DWR T&E Water
Wise County Parcels	USFWS	Mammal	FE	<i>Myotis grisescens</i>	Gray Bat	No	-
		Mammal	FE	<i>Myotis sodalis</i>	Indiana Bat	No	-
		Mammal	FEST	<i>Myotis septentrionalis</i>	Northern Long-eared Bat	No	-
		Fish	FTST	<i>Noturus flavipinnis</i>	Yellowfin Madtom	No	Yes
		Clam	FESE	<i>Quadrula sparsa</i>	Appalachian Monkeyface (pearlymussel)	No	-
		Clam	FESE	<i>Lemiox rimosus</i>	Birdwing Pearlymussel	No	Yes
		Clam	FESE	<i>Hemistena lata</i>	Cracking Pearlymussel	No	No
		Clam	FE	<i>Villosa trabalis</i>	Cumberland Bean (pearlymussel)	No	-
		Clam	FE	<i>Quadrula intermedia</i>	Cumberland Monkeyface (pearlymussel)	No	Yes
		Clam	FESE	<i>Epioblasma brevidens</i>	Cumberlandian Combshell	Yes	Yes
		Clam	FESE	<i>Fusconaia cuneolus</i>	Finerayed Pigtoe	No	Yes
		Clam	FESE	<i>Ptychobranchus subtentus</i>	Fluted Kidneyshell	Yes	Yes
		Clam	FE	<i>Pegias fabula</i>	Littlewing Pearlymussel	No	-
		Clam	FESE	<i>Epioblasma capsaeformis</i>	Oyster Mussel	Yes	Yes
		Clam	FESE	<i>Villosa perpurpurea</i>	Purple Bean	Yes	Yes
		Clam	FESE	<i>Quadrula cylindrica strigillata</i>	Rough Rabbitsfoot	Yes	Yes
		Clam	FESE	<i>Plethobasus cyphyus</i>	Sheepnose Mussel	No	Yes
		Clam	FESE	<i>Fusconaia cor</i>	Shiny Pigtoe	No	Yes
		Clam	FESE	<i>Pleuronaia dolabelloides</i>	Slabside Pearlymussel	Yes	Yes
		Clam	FESE	<i>Epioblasma triquetra</i>	Snuffbox Mussel	No	Yes
		Clam	FESE	<i>Cumberlandia monodonta</i>	Spectaclecase (mussel)	No	Yes
		Clam	FE	<i>Epioblasma florentina walkeri (=E. walkeri)</i>	Tan Riffleshell	No	-
	DWR	Clam	FESE	<i>Venustaconcha trabalis</i>	Tennessee Bean	-	Yes
		Fish	FTST	<i>Erimystax cahni</i>	Slender Chub	-	Yes
		Mammal	SE	<i>Myotis lucifugus</i>	Little Brown Bat	-	No
		Mammal	SE	<i>Perimyotis subflavus</i>	Tri-colored Bat	-	No
		Clam	SE	<i>Elliptio crassidens</i>	Elephantear	-	Yes
		Clam	SE	<i>Truncilla truncata</i>	Deertoe	-	Yes
		Fish	ST	<i>Etheostoma denoncourti</i>	Golden Darter	-	Yes
		Clam	ST	<i>Io fluvialis</i>	Spiny Riversnail	-	Yes
		Clam	ST	<i>Ligumia recta</i>	Black Sandshell	-	Yes
		Fish	ST	<i>Cyprinella whipplei</i>	Steelcolor Shiner	-	Yes
		Fish	ST	<i>Notropis atherinoides</i>	Emerald Shiner	-	Yes
		Clam	ST	<i>Leptodea fragilis</i>	Fragile Papershell	-	Yes
		Clam	FP	<i>Fusconaia subrotunda</i>	Longsolid	-	Yes



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032
<http://www.fws.gov/northeast/virginiafield/>

In Reply Refer To:

April 21, 2021

Consultation Code: 05E2VA00-2021-SLI-3285

Event Code: 05E2VA00-2021-E-09503

Project Name: Clinch River - Wise county parcels

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:
<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;
<http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office

6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2021-SLI-3285

Event Code: 05E2VA00-2021-E-09503

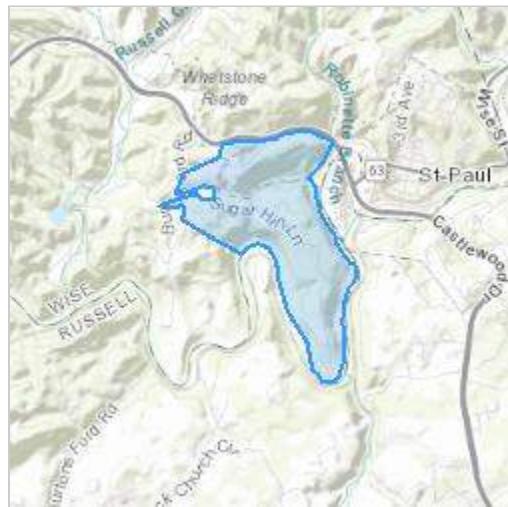
Project Name: Clinch River - Wise county parcels

Project Type: RECREATION CONSTRUCTION / MAINTENANCE

Project Description: The subject site contains multiple parcels along Clinch River for potential recreational use.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.8984635,-82.32183968112008,14z>



Counties: Russell and Wise counties, Virginia

Endangered Species Act Species

There is a total of 22 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i>	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	
Indiana Bat <i>Myotis sodalis</i>	Endangered
There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	
Northern Long-eared Bat <i>Myotis septentrionalis</i>	Threatened
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	

Fishes

NAME	STATUS
Yellowfin Madtom <i>Noturus flavipinnis</i>	Threatened

Population: Wherever found, except where listed as an experimental population
There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: <https://ecos.fws.gov/ecp/species/8565>

Clams

NAME	STATUS
Appalachian Monkeyface (pearlymussel) <i>Quadrula sparsa</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7154	Endangered
Birdwing Pearlymussel <i>Lemiox rimosus</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6636	Endangered
Cracking Pearlymussel <i>Hemistena lata</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4130	Endangered
Cumberland Bean (pearlymussel) <i>Villosa trabalis</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6061	Endangered
Cumberland Monkeyface (pearlymussel) <i>Quadrula intermedia</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6999	Endangered
Cumberlandian Combshell <i>Epioblasma brevidens</i> Population: Wherever found; Except where listed as Experimental Populations There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3119	Endangered
Finerayed Pigtoe <i>Fusconaia cuneolus</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3038	Endangered
Fluted Kidneyshell <i>Ptychobranchus subtentus</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1397	Endangered
Littlewing Pearlymussel <i>Pegias fabula</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2572	Endangered
Oyster Mussel <i>Epioblasma capsaeformis</i> Population: Wherever found; Except where listed as Experimental Populations There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2099	Endangered
Purple Bean <i>Villosa perpurpurea</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4125	Endangered

NAME	STATUS
Rough Rabbitsfoot <i>Quadrula cylindrica strigillata</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5629	Endangered
Sheepnose Mussel <i>Plethobasus cyphyus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6903	Endangered
Shiny Pigtoe <i>Fusconaia cor</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2573	Endangered
Slabside Pearlymussel <i>Pleuronaia dolabelloides</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1518	Endangered
Snuffbox Mussel <i>Epioblasma triquetra</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4135	Endangered
Spectaclecase (mussel) <i>Cumberlandia monodonta</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7867	Endangered
Tan Riffleshell <i>Epioblasma florentina walkeri</i> (= <i>E. walkeri</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1247	Endangered

Critical habitats

There are 6 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Cumberlandian Combshell <i>Epioblasma brevidens</i> https://ecos.fws.gov/ecp/species/3119#crithab	Final
Fluted Kidneyshell <i>Ptychobranchus subtentus</i> https://ecos.fws.gov/ecp/species/1397#crithab	Final
Oyster Mussel <i>Epioblasma capsaeformis</i> https://ecos.fws.gov/ecp/species/2099#crithab	Final
Purple Bean <i>Villosa perpurpurea</i> https://ecos.fws.gov/ecp/species/4125#crithab	Final
Rough Rabbitsfoot <i>Quadrula cylindrica strigillata</i> https://ecos.fws.gov/ecp/species/5629#crithab	Final
Slabside Pearlymussel <i>Pleuronaia dolabelloides</i> https://ecos.fws.gov/ecp/species/1518#crithab	Final

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Virginia Ecological Services Field Office

6669 Short Lane

Gloucester, VA 23061-4410

Phone: (804) 693-6694 Fax: (804) 693-9032

<http://www.fws.gov/northeast/virginiafield/>

IPaC Record Locator: 817-101427262

April 21, 2021

Subject: Consistency letter for the 'Clinch River - Wise county parcels' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Kaelyn Davis:

The U.S. Fish and Wildlife Service (Service) received on April 21, 2021 your effects determination for the 'Clinch River - Wise county parcels' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take"^[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not apply** to the following ESA-protected species that also may occur in your Action area:

- Appalachian Monkeyface (pearlymussel) *Quadrula sparsa* Endangered
- Birdwing Pearlymussel *Lemiox rimosus* Endangered

- Cracking Pearlymussel *Hemistena lata* Endangered
- Cumberland Bean (pearlymussel) *Villosa trabalis* Endangered
- Cumberland Monkeyface (pearlymussel) *Quadrula intermedia* Endangered
- Cumberlandian Combshell *Epioblasma brevidens* Endangered
- Finerayed Pigtoe *Fusconaia cuneolus* Endangered
- Fluted Kidneyshell *Ptychobranchus subtentus* Endangered
- Gray Bat *Myotis grisescens* Endangered
- Indiana Bat *Myotis sodalis* Endangered
- Littlewing Pearlymussel *Pegias fabula* Endangered
- Oyster Mussel *Epioblasma capsaeformis* Endangered
- Purple Bean *Villosa perpurpurea* Endangered
- Rough Rabbitsfoot *Quadrula cylindrica strigillata* Endangered
- Sheepnose Mussel *Plethobasus cyphyus* Endangered
- Shiny Pigtoe *Fusconaia cor* Endangered
- Slabside Pearlymussel *Pleuronaia dolabelloides* Endangered
- Snuffbox Mussel *Epioblasma triquetra* Endangered
- Spectaclecase (mussel) *Cumberlandia monodonta* Endangered
- Tan Riffleshell *Epioblasma florentina walkeri* (=*E. walkeri*) Endangered
- Yellowfin Madtom *Noturus flavipinnis* Threatened

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

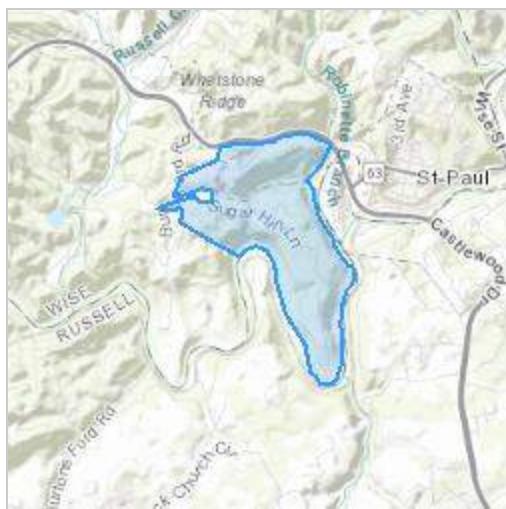
Clinch River - Wise county parcels

2. Description

The following description was provided for the project 'Clinch River - Wise county parcels':

The subject site contains multiple parcels along Clinch River for potential recreational use.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.8984635,-82.32183968112008,14z>



Determination Key Result

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

No

2. Will your activity purposefully **Take** northern long-eared bats?

No

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

Automatically answered

No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

No

6. Will the action involve Tree Removal?

Yes

7. Will the action only remove hazardous trees for the protection of human life or property?

No

8. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

No

9. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below.

Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below.

Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below.

Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

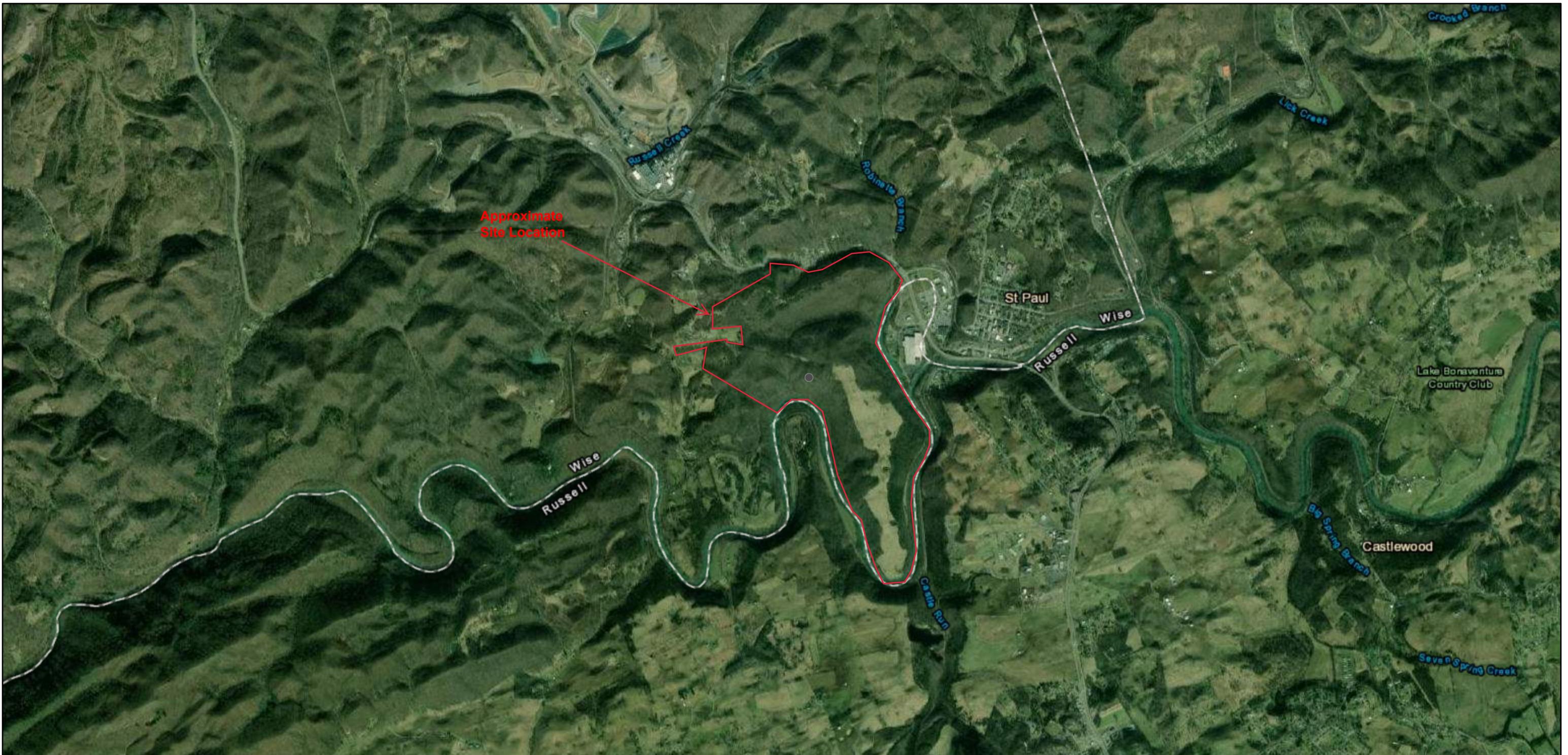
0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

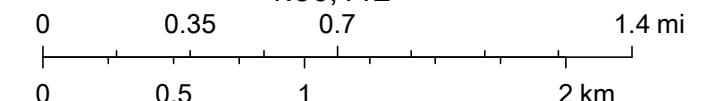
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Clinch River - Wise Parcels - NLEB Locations and Roost Trees



4/21/2021, 3:31:31 PM

1:36,112



VITA, Esri, HERE, Garmin, Maxar

Site Location

36,54,13.4 -82,20,02.6
is the Search Point

Show Position Rings

Yes No
1 mile and 1/4 mile at the Search Point

Show Search Area

Yes No
2 Search distance miles radius

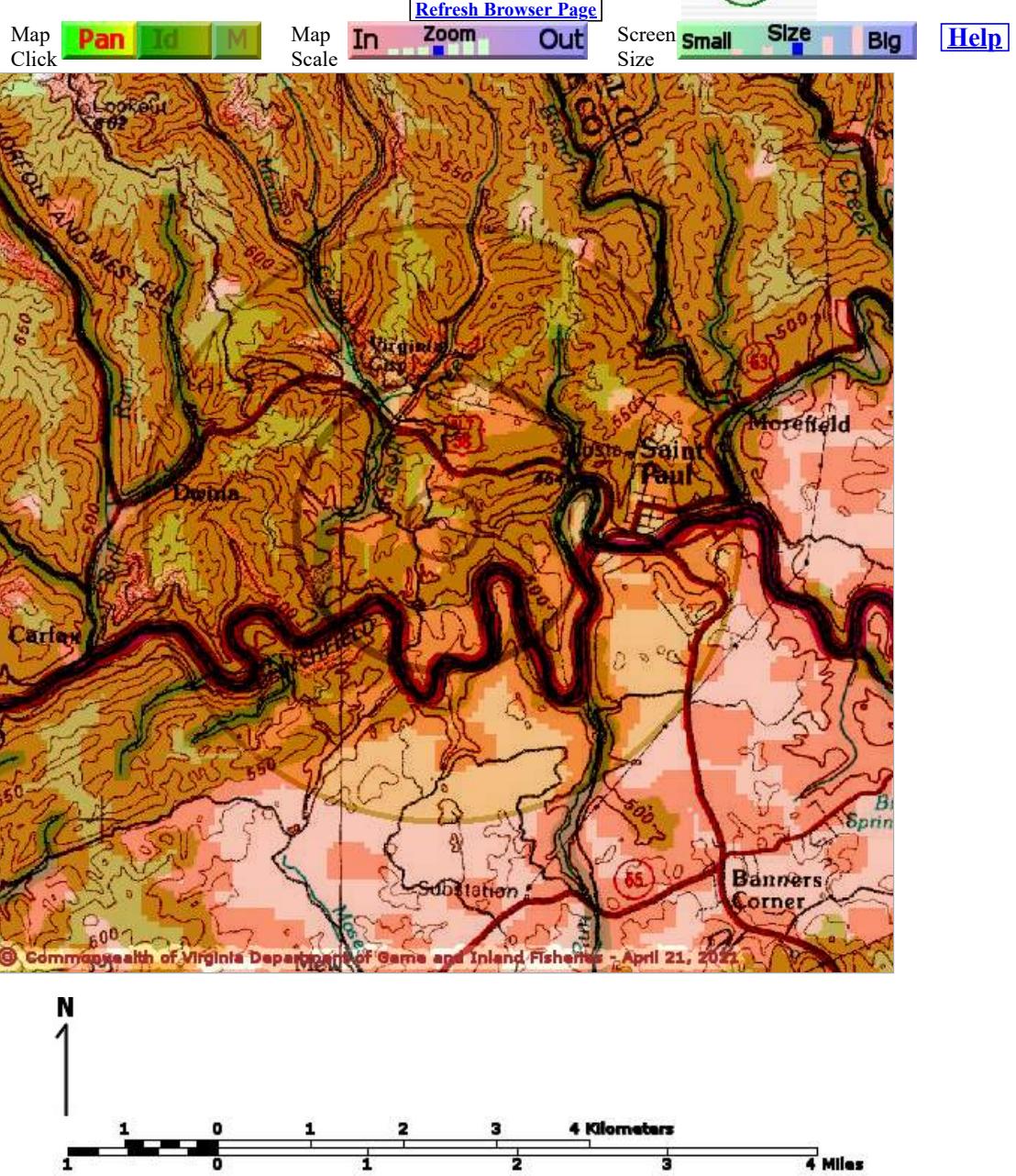
Search Point is at map center

Base Map Choices

Topography

Map Overlay Choices

Current List: Position, Search, BECAR, BAEANests, TEWaters, TierII, Habitat, Trout, Anadromous

Map Overlay Legend

Point of Search 36,54,13.4 -82,20,02.6

Map Location 36,54,13.4 -82,20,02.6

Select Coordinate System: Degrees,Minutes,Seconds Latitude - Longitude

- Decimal Degrees Latitude - Longitude
- Meters UTM NAD83 East North Zone
- Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft.terraserver-usa.com for details)

Map projection is UTM Zone 17 NAD 1983 with left 376348 and top 4089825. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5

T & E Waters**Federal****State****Predicted Habitat****WAP Tier I & II****Aquatic****Terrestrial****Trout Waters****Class I - IV****Class V - VI****Anadromous Fish Reach****Confirmed****Potential**** Impediment****Bald Eagle Concentration Areas and Roosts**

square miles.

Topographic maps and Black and white aerial photography for year 1990+ are from the United States Department of the Interior, United States Geological Survey. Color aerial photography acquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.

Shaded topographic maps are from TOPO! ©2006 National Geographic
<http://www.nationalgeographic.com/topo>

All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2021-04-21 16:05:21 (qa qc March 21, 2016 12:20 - tn=1090820.0 dist=3218
I)
\$poi=36.9037400 -82.3340795

VaFWIS Initial Project Assessment Report Compiled on 4/21/2021,

4:05:19 PM

Known or likely to occur within a **2 mile radius around point 36.9037400 -82.3340795**
in **167 Russell County, 195 Wise County, VA**

[View Map of Site Location](#)

627 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 73) (73 species with Status* or Tier I** or Tier II**))

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
050023	FESE	Ia	Bat, Indiana	Myotis sodalis		BOVA
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	Yes	BOVA,TEWaters,Habitat
060169	FESE	Ia	Bean, Tennessee	Venustaconcha tratalis	Yes	BOVA,TEWaters,Habitat
060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	Yes	BOVA,TEWaters,Habitat
060023	FESE	Ia	Fanshell	Cyprogenia stegaria		Habitat
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	Yes	TEWaters,Habitat
060123	FESE	Ia	Monkeyface (pearlymussel), Cumberland	Theliderma intermedia		BOVA
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	Yes	BOVA,TEWaters,Habitat
060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	Yes	BOVA,TEWaters,Habitat,SppObs
060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	Yes	BOVA,TEWaters,Habitat,SppObs
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	Yes	BOVA,TEWaters,Habitat,SppObs
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	Yes	BOVA,TEWaters,Habitat,SppObs
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	Yes	BOVA,TEWaters,Habitat,SppObs
060082	FESE	Ib	Pearlymussel, cracking	Hemistena lata		BOVA,Habitat
060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	Yes	BOVA,TEWaters,Habitat
060094	FESE	Ic	Pearlymussel, littlewing	Pegias fabula		BOVA
050021	FESE	IIa	Bat, gray	Myotis grisescens		BOVA

060146	FESE	IIa	Bean, Rayed	Villosa fabalis		BOVA
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	Yes	BOVA,TEWaters,Habitat,SppObs
060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	Yes	BOVA,TEWaters,Habitat
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	Yes	BOVA,TEWaters,Habitat,SppObs
060034	FESE		Blossom, green	Epioblasma gubernaculum		Habitat
010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	Yes	BOVA,TEWaters,Habitat,SppObs
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis	Yes	BOVA,SppObs
010111	FTST	Ic	Chub, slender	Erimystax cahni	Yes	BOVA,TEWaters,Habitat
070118	FTST	Ic	Crayfish, Big Sandy	Cambarus callainus		BOVA
050020	SE	Ia	Bat, little brown	Myotis lucifugus	Yes	BOVA,SppObs
050027	SE	Ia	Bat, tri-colored	Perimyotis subflavus	Yes	BOVA,SppObs
060006	SE	Ib	Floater, brook	Alasmidonta varicosa		BOVA
060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis		BOVA,Habitat
060080	SE	IIa	Heelsplitter, Tennessee	Lasmigona holstonia		BOVA,Habitat
060174	SE	IIa	Pigtoe, pyramid	Pleurobema rubrum		BOVA
060055	SE	IIc	Elimia, spider	Elimia arachnoidea		BOVA
060139	SE	IIc	Lilliput, purple	Toxolasma lividum		BOVA
060027	SE	IIIa	Elephantear	Elliptio crassidens	Yes	BOVA,TEWaters,Habitat,SppObs
060168	SE	IIIb	Deertoe	Truncilla truncata	Yes	BOVA,TEWaters,Habitat,SppObs
040267	SE		Wren, Bewick's	Thryomanes bewickii		BOVA
040096	ST	Ia	Falcon, peregrine	Falco peregrinus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
010342	FPST	Ic	Darter, sickle	Percina williamsi		BOVA,Habitat
010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	Yes	BOVA,TEWaters
060069	ST	IIIa	Riversnail, spiny	Io fluvialis	Yes	BOVA,TEWaters,Habitat,SppObs
060086	ST	IIIa	Sandshell, black	Ligumia recta	Yes	BOVA,TEWaters,Habitat,SppObs

010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	Yes	BOVA,TEWaters,Habitat
060124	ST	IVb	Pimpleback	Cyclonaias pustulosa		BOVA,Habitat
010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes	BOVA,TEWaters,Habitat
060163	ST	IVc	Papershell, fragile	Leptodea fragilis	Yes	BOVA,TEWaters,Habitat,SppObs
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
060053	FP	IIIa	Longsolid	Fusconia subrotunda	Yes	BOVA,SppObs
020020	CC	Ia	Hellbender, eastern	Cryptobranchus alleganiensis alleganiensis		BOVA
020030	CC	IIb	Salamander, green	Aneides aeneus		BOVA
030012	CC	IVa	Rattlesnake, timber	Crotalus horridus		BOVA
010449		Ia	Dace, Clinch	Chrosomus sp. cf. saylori		BOVA
040092		Ia	Eagle, golden	Aquila chrysaetos		BOVA
040306		Ia	Warbler, golden-winged	Vermivora chrysoptera		BOVA
050024		Ia	Myotis, eastern small-footed	Myotis leibii	Yes	BOVA,SppObs
100248		Ia	Fritillary, regal	Speyeria idalia idalia		BOVA
010343		Ib	Darter, ashy	Etheostoma cinereum	Yes	BOVA,Habitat,SppObs
040213		Ic	Owl, northern saw-whet	Aegolius acadicus		BOVA
070181		Ic	Crayfish, Big Stone	Cambarus magerae		BOVA
010341		IIa	Logperch, blotchside	Percina burtoni	Yes	BOVA,Habitat,SppObs
020011		IIa	Frog, mountain chorus	Pseudacris brachyphona		BOVA,Habitat
040052		IIa	Duck, American black	Anas rubripes		BOVA
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA
040140		IIa	Woodcock, American	Scolopax minor		BOVA
060050		IIa	Pigtoe,	Pleuronaia	Yes	BOVA,Habitat,SppObs

			Tennessee	barnesiana		
040203		IIb	Cuckoo, black-billed	Coccyzus erythrophthalmus		BOVA
010075		IIc	Shiner, popeye	Notropis ariommus	Yes	BOVA,Habitat,SppObs
020081		IIc	Salamander, southern zigzag	Plethodon ventralis		BOVA
040304		IIc	Warbler, Swainson's	Limnothlypis swainsonii		BOVA
060004		IIc	Elktoe	Alasmidonta marginata	Yes	BOVA,SppObs
080101		IIc	Clubtail, Cherokee	Gomphus consanguis		Habitat
080219		IIc	Roachfly, lobed	Tallaperla lobata		BOVA

To view All 627 species [View 627](#)

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed;
FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need;
III=VA Wildlife Action Plan - Tier III - High Conservation Need;

IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

Virginia Widlife Action Plan Conservation Opportunity Ranking:

a - On the ground management strategies/actions exist and can be feasibly implemented.;

b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;

c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

Bat Colonies or Hibernacula: Not Known

Anadromous Fish Use Streams

N/A

Colonial Water Bird Survey

N/A

Threatened and Endangered Waters (11 Reaches)

[View Map of All Threatened and Endangered Waters](#)

Stream Name	T&E Waters Species					View Map
	Highest TE*	BOVA Code, Status*, Tier **, Common & Scientific Name				
Clinch River (0252045)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis

	010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei		
	010433	ST	IIb	Darter, golden	Etheostoma denoncourtii		
	060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus		
	060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta		
	060027	SE	IIIa	Elephantear	Elliptio crassidens		
	060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens		
	060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis		
	060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra		
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus		
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis		
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides		
	060086	ST	IIIa	Sandshell, black	Ligumia recta		
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus		
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus		
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa		
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
	060168	SE	IIIb	Deertoe	Truncilla truncata		
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		
Clinch River (0258298)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes

010111	FTST	Ic	Chub, slender	Erimystax cahni
010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
010433	ST	IIb	Darter, golden	Etheostoma denoncourtii
060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
060027	SE	IIIa	Elephantear	Elliptio crassidens
060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
060069	ST	IIIa	Riversnail, spiny	Io fluvialis
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
060086	ST	IIIa	Sandshell, black	Ligumia recta
060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
060163	ST	IVc	Papershell, fragile	Leptodea fragilis
060168	SE	IIIb	Deertoe	Truncilla truncata

		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Clinch River (0258418)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cajni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060086	ST	IIIa	Sandshell, black	Ligumia recta	
		060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphus	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
		060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	

		060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
		060168	SE	IIIb	Deertoe	Truncilla truncata	
		060169	FESE	Ia	Bean, Tennessee	Venustaoncha trabalis	
Clinch River (0259724)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
		060086	ST	IIIa	Sandshell, black	Ligumia recta	
		060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
		060122	FESE	Ia	Rabbitsfoot, rough	Thelidderma cylindrica	
		060125	FESE	Ia	Monkeyface	Thelidderma	

				<u>(pearlymussel), Appalachian</u>	sparsa
060147	FESE	Ia		<u>Bean, Purple</u>	Villosa perpurpurea
060163	ST	IVc		<u>Papershell, fragile</u>	Leptodea fragilis
060168	SE	IIIb		<u>Deertoe</u>	Truncilla truncata
060169	FESE	Ia		<u>Bean, Tennessee</u>	Venustaoncha trabalis
<u>Clinch River (0261067)</u>	FESE				Yes
010076	ST	IVc		<u>Shiner, emerald</u>	Notropis atherinoides
010111	FTST	Ic		<u>Chub, slender</u>	Erimystax cahni
010331	FTST	Ia		<u>Madtom, yellowfin</u>	Noturus flavipinnis
010335	ST	IIIc		<u>Shiner, steelcolor</u>	Cyprinella whipplei
010433	ST	IIb		<u>Darter, golden</u>	Etheostoma denoncourtii
060020	FESE	Ia		<u>Pearlymussel, birdwing</u>	Lemiox rimosus
060021	FESE	Ib		<u>Spectaclecase</u>	Cumberlandia monodonta
060027	SE	IIIa		<u>Elephantear</u>	Elliptio crassidens
060030	FESE	Ia		<u>Combshell, Cumberlandian</u>	Epioblasma brevidens
060031	FESE	Ia		<u>Mussel, oyster</u>	Epioblasma capsaeformis
060035	FESE	Ia		<u>Mussel, snuffbox</u>	Epioblasma triquetra
060051	FESE	Ia		<u>Pigtoe, finerayed</u>	Fusconaia cuneolus
060052	FESE	Ia		<u>Pigtoe, shiny</u>	Fusconaia cor
060069	ST	IIIa		<u>Riversnail, spiny</u>	Io fluvialis
060083	FESE	IIa		<u>Pearlymussel, slabside</u>	Pleuronaia dolabelloides
060086	ST	IIIa		<u>Sandshell, black</u>	Ligumia recta
060110	FESE	IIa		<u>Mussel, sheepnose</u>	Plethobasus cyphyus
060121	FESE	IIa		<u>Kidneyshell, fluted</u>	Ptychobranchus

					subtentus	
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa		
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
060168	SE	IIIb	Deertoe	Truncilla truncata		
060169	FESE	Ia	Bean, Tennessee	Venustaoncha trabalis		
Clinch River (0263533)	FESE					Yes
010076	ST	IVc	Shiner, emerald	Notropis atherinoides		
010111	FTST	Ic	Chub, slender	Erimystax cahni		
010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis		
010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei		
010433	ST	IIb	Darter, golden	Etheostoma denoncourtii		
060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus		
060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta		
060027	SE	IIIa	Elephantear	Elliptio crassidens		
060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens		
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis		
060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra		
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus		
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		
060069	ST	IIIa	Riversnail, spiny	Io fluvialis		
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides		

		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Thelidderma cylindrica
		060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Thelidderma sparsa
		060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIIb	Deer toe	Truncilla truncata
		060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis
Clinch River (0264131)	FESE	010076	ST	IVc	Shiner, emerald	Notropis atherinoides
		010111	FTST	Ic	Chub, slender	Erimystax cahni
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
		010433	ST	IIb	Darter, golden	Etheostoma denoncourtii
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
		060027	SE	IIIa	Elephantear	Elliptio crassidens
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
		060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus

Yes

	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
	060086	ST	IIIa	Sandshell, black	Ligumia recta	
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
	060122	FESE	Ia	Rabbitsfoot, rough	Thelidderma cylindrica	
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Thelidderma sparsa	
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
	060168	SE	IIIb	Deertoe	Truncilla truncata	
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Clinch River (0265711)	FESE	010076	ST	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Chub, slender	Erimystax cahni	
		010331	FTST	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Spectaclecase	Cumberlandia monodonta	
		060027	SE	Elephantear	Elliptio crassidens	
		060030	FESE	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Mussel, oyster	Epioblasma capsaeformis	

	060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
	060086	ST	IIIa	Sandshell, black	Ligumia recta	
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
	060168	SE	IIIb	Deertoe	Truncilla truncata	
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Clinch River (0266595)	FESE	010076	ST	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Chub, slender	Erimystax cahni	
		010331	FTST	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Spectaclecase	Cumberlandia monodonta	
		060027	SE	Elephantear	Elliptio crassidens	

	060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
	060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
	060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
	060086	ST	IIIa	Sandshell, black	Ligumia recta	
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
	060122	FESE	Ia	Rabbitsfoot, rough	Thelidderma cylindrica	
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Thelidderma sparsa	
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
	060168	SE	IIIb	Deertoe	Truncilla truncata	
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Clinch River (0267347)	FESE	010076	ST	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Chub, slender	Erimystax cahni	
		010331	FTST	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	Shiner, steelcolor	Cyprinella whipplei	
		010433	ST	Darter, golden	Etheostoma denoncourtii	
		060020	FESE	Pearlymussel, birdwing	Lemiox rimosus	

	060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
	060027	SE	IIIa	Elephantear	Elliptio crassidens	
	060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
	060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
	060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
	060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
	060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
	060069	ST	IIIa	Riversnail, spiny	Io fluvialis	
	060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides	
	060086	ST	IIIa	Sandshell, black	Ligumia recta	
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
	060168	SE	IIIb	Deertoe	Truncilla truncata	
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
Clinch River (0268011)	FESE	010076	ST	Shiner, emerald	Notropis atherinoides	Yes
		010111	FTST	Chub, slender	Erimystax cahni	
		010331	FTST	Madtom, yellowfin	Noturus flavipinnis	
		010335	ST	Shiner, steelcolor	Cyprinella whipplei	

010433	ST	IIb	Darter, golden	Etheostoma denoncourtii
060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
060027	SE	IIIa	Elephantear	Elliptio crassidens
060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
060069	ST	IIIa	Riversnail, spiny	Io fluvialis
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
060086	ST	IIIa	Sandshell, black	Ligumia recta
060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
060122	FESE	Ia	Rabbitsfoot, rough	Thelidderma cylindrica
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Thelidderma sparsa
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
060163	ST	IVc	Papershell, fragile	Leptodea fragilis
060168	SE	IIIb	Deertoe	Truncilla truncata
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Habitat Predicted for Aquatic WAP Tier I & II Species (14 Reaches)[View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species](#)

Stream Name	Tier Species						View Map
	Highest TE *	BOVA Code, Status * , Tier ** , Common & Scientific Name					
Castle Run (60102051)	SE	060080	SE	Ia	Heelsplitter, Tennessee	Lasmigona holstonia	Yes
		080101		IIC	Clubtail, Cherokee	Gomphus consanguis	
Castle Run (60102051)	SE	060080	SE	Ia	Heelsplitter, Tennessee	Lasmigona holstonia	Yes
Clinch River (60102051)	FESE	010075		IIC	Shiner, popeye	Notropis ariommus	Yes
		010076	ST	IVC	Shiner, emerald	Notropis atherinoides	
		010111	FTST	Ic	Chub, slender	Erimystax cahni	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010332			Darter, Tippecanoe	Etheostoma tippecanoe	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010341		Ia	Logperch, blotchside	Percina burtoni	
		010342	FPST	Ic	Darter, sickle	Percina williamsi	
		010343		Ib	Darter, ashy	Etheostoma cinereum	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	

060023	FESE	Ia	Fanshell	Cyprogenia stegaria
060027	SE	IIIa	Elephantear	Elliptio crassidens
060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
060034	FESE		Blossom, green	Epioblasma gubernaculum
060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra
060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
060069	ST	IIIa	Riversnail, spiny	Io fluvialis
060082	FESE	Ib	Pearlymussel, cracking	Hemistena lata
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
060086	ST	IIIa	Sandshell, black	Ligumia recta
060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
060124	ST	IVb	Pimpleback	Cyclonaias pustulosa
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea
060163	ST	IVc	Papershell, fragile	Leptodea fragilis
060168	SE	IIIb	Deertoe	Truncilla truncata
060169	FESE	Ia	Bean, Tennessee	Venustaconcha tratalis

		080101	IIC	Clubtail, Cherokee	Gomphus consanguis	
Clinch River (60102051)	FESE	010075		IIC Shiner, popeye	Notropis ariommus	Yes
		010076	ST	IVC Shiner, emerald	Notropis atherinoides	
		010111	FTST	Ic Chub, slender	Erimystax cahni	
		010331	FTST	Ia Madtom, yellowfin	Noturus flavipinnis	
		010332		Darter, Tippecanoe	Etheostoma tippecanoe	
		010335	ST	IIIc Shiner, steelcolor	Cyprinella whipplei	
		010341		IIa Logperch, blotchside	Percina burtoni	
		010342	FPST	Ic Darter, sickle	Percina williamsi	
		060020	FESE	Ia Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib Spectaclecase	Cumberlandia monodonta	
		060023	FESE	Ia Fanshell	Cyprogenia stegaria	
		060027	SE	IIIa Elephantear	Elliptio crassidens	
		060030	FESE	Ia Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia Mussel, oyster	Epioblasma capsaeformis	
		060034	FESE		Blossom, green	
		060035	FESE	Ia Mussel, snuffbox	Epioblasma triquetra	
		060050		IIa Pigtoe, Tennessee	Pleuronaia barnesiana	
		060051	FESE	Ia Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia Pigtoe, shiny	Fusconaia cor	
		060069	ST	IIIa Riversnail, spiny	Io fluvialis	
		060082	FESE	Ib Pearlymussel, cracking	Hemistena lata	
		060083	FESE	IIa Pearlymussel, slabside	Pleuronaia dolabelloides	

	060086	ST	IIIa	Sandshell, black	Ligumia recta	
	060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus	
	060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus	
	060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	
	060124	ST	IVb	Pimpleback	Cyclonaias pustulosa	
	060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
	060147	FESE	Ia	Bean, Purple	Villosa perpurpurea	
	060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
	060168	SE	IIIb	Deertoe	Truncilla truncata	
	060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis	
	080101		IIc	Clubtail, Cherokee	Gomphus consanguis	
Clinch River (60102051)	FESE	010075	IIc	Shiner, popeye	Notropis ariommus	Yes
		010076	ST	Shiner, emerald	Notropis atherinoides	
		010111	FTST	Chub, slender	Erimystax cahni	
		010331	FTST	Madtom, yellowfin	Noturus flavipinnis	
		010332		Darter, Tippecanoe	Etheostoma tippecanoe	
		010335	ST	Shiner, steelcolor	Cyprinella whipplei	
		010341		Logperch, blotchside	Percina burtoni	
		010342	FPST	Darter, sickle	Percina williamsi	
		060020	FESE	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Spectaclecase	Cumberlandia monodonta	
		060023	FESE	Fanshell	Cyprogenia	

				stegaria		
060027	SE	IIIa	Elephantear	Elliptio crassidens		
060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens		
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis		
060034	FESE		Blossom, green	Epioblasma gubernaculum		
060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana		
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus		
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		
060069	ST	IIIa	Riversnail, spiny	Io fluvialis		
060082	FESE	Ib	Pearlymussel, cracking	Hemistena lata		
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides		
060086	ST	IIIa	Sandshell, black	Ligumia recta		
060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus		
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus		
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica		
060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa		
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		
060163	ST	IVc	Papershell, fragile	Leptodea fragilis		
060168	SE	IIIb	Deertoe	Truncilla truncata		
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		
080101		IIc	Clubtail, Cherokee	Gomphus consanguis		
Clinch River (60102051)	FESE	010075	IIC	Shiner, popeye	Notropis ariommus	Yes
		010076	ST	Shiner, emerald	Notropis atherinoides	

010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis
010332			Darter, Tippecanoe	Etheostoma tippecanoe
010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei
010341		IIa	Logperch, blotchside	Percina burtoni
060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus
060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta
060023	FESE	Ia	Fanshell	Cyprogenia stegaria
060027	SE	IIIa	Elephantear	Elliptio crassidens
060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis
060034	FESE		Blossom, green	Epioblasma gubernaculum
060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra
060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana
060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor
060069	ST	IIIa	Riversnail, spiny	Io fluvialis
060082	FESE	Ib	Pearlymussel, cracking	Hemistena lata
060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
060086	ST	IIIa	Sandshell, black	Ligumia recta
060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus
060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
060124	ST	IVb	Pimpleback	Cyclonaias pustulosa

		060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa	
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis	
		060168	SE	IIIb	Deertoe	Truncilla truncata	
		080101		IIc	Clubtail, Cherokee	Gomphus consanguis	
Clinch River (60102051)	FESE	010075		IIc	Shiner, popeye	Notropis ariommus	Yes
		010076	ST	IVc	Shiner, emerald	Notropis atherinoides	
		010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis	
		010332			Darter, Tippecanoe	Etheostoma tippecanoe	
		010335	ST	IIIc	Shiner, steelcolor	Cyprinella whipplei	
		010341		IIa	Logperch, blotchside	Percina burtoni	
		060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus	
		060021	FESE	Ib	Spectaclecase	Cumberlandia monodonta	
		060023	FESE	Ia	Fanshell	Cyprogenia stegaria	
		060027	SE	IIIa	Elephantear	Elliptio crassidens	
		060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060034	FESE		Blossom, green	Epioblasma gubernaculum	
		060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra	
		060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor	
		060069	ST	IIIa	Riversnail, spiny	Io fluvialis	

		060082	FESE	Ib	Pearlymussel, cracking.	Hemistena lata
		060083	FESE	IIa	Pearlymussel, slabside	Pleuronaia dolabelloides
		060086	ST	IIIa	Sandshell, black	Ligumia recta
		060110	FESE	IIa	Mussel, sheepnose	Plethobasus cyphyus
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica
		060124	ST	IVb	Pimpleback	Cyclonaias pustulosa
		060125	FESE	Ia	Monkeyface (pearlymussel), Appalachian	Theliderma sparsa
		060163	ST	IVc	Papershell, fragile	Leptodea fragilis
		060168	SE	IIIb	Deertoe	Truncilla truncata
Honey Branch (60102051)	SE	060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana
		060080	SE	IIa	Heelsplitter, Tennessee	Lasmigona holstonia
		080101		IIc	Clubtail, Cherokee	Gomphus consanguis
Lick Creek (60102051)	FESE	010341		IIa	Logperch, blotchside	Percina burtoni
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis
		060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		080101		IIc	Clubtail, Cherokee	Gomphus consanguis
Lick Creek (60102051)	FESE	060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana
		060080	SE	IIa	Heelsplitter, Tennessee	Lasmigona holstonia
		060121	FESE	IIa	Kidneyshell, fluted	Ptychobranchus subtentus
		080101		IIc	Clubtail, Cherokee	Gomphus consanguis

Meade Creek (60102051)	SE	060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	Yes
		060080	SE	IIa	Heelsplitter, Tennessee	Lasmigona holstonia	
Robinette Branch (60102051)		080101		IIc	Clubtail, Cherokee	Gomphus consanguis	Yes
Russell Creek (60102051)		060050		IIa	Pigtoe, Tennessee	Pleuronaia barnesiana	Yes
		080101		IIc	Clubtail, Cherokee	Gomphus consanguis	
tributary (60102051)		080101		IIc	Clubtail, Cherokee	Gomphus consanguis	Yes
tributary (60102051)		080101		IIc	Clubtail, Cherokee	Gomphus consanguis	Yes

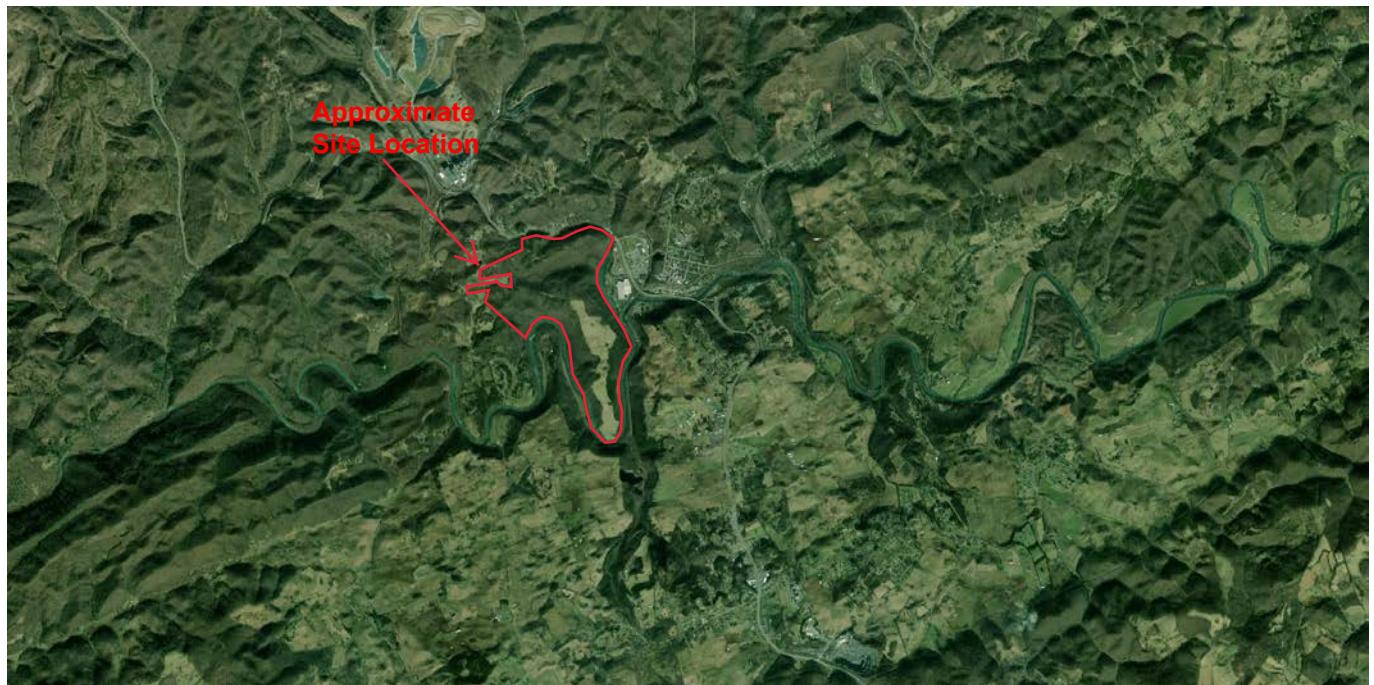
Habitat Predicted for Terrestrial WAP Tier I & II Species

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
020011		IIa	Frog, mountain chorus	Pseudacris brachyphona	Yes

Public Holdings:

N/A

Compiled on 4/21/2021, 4:05:19 PM I1090820.0 report=IPA searchType=R dist= 3218 poi= 36.9037400 -82.3340795
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Layers: Eagle Roost Buffers, Eagle Roost Polygons, Eagle Roosts

Map Center [longitude, latitude]: [-82.31523513793945, 36.904916080135976]

Map Link:

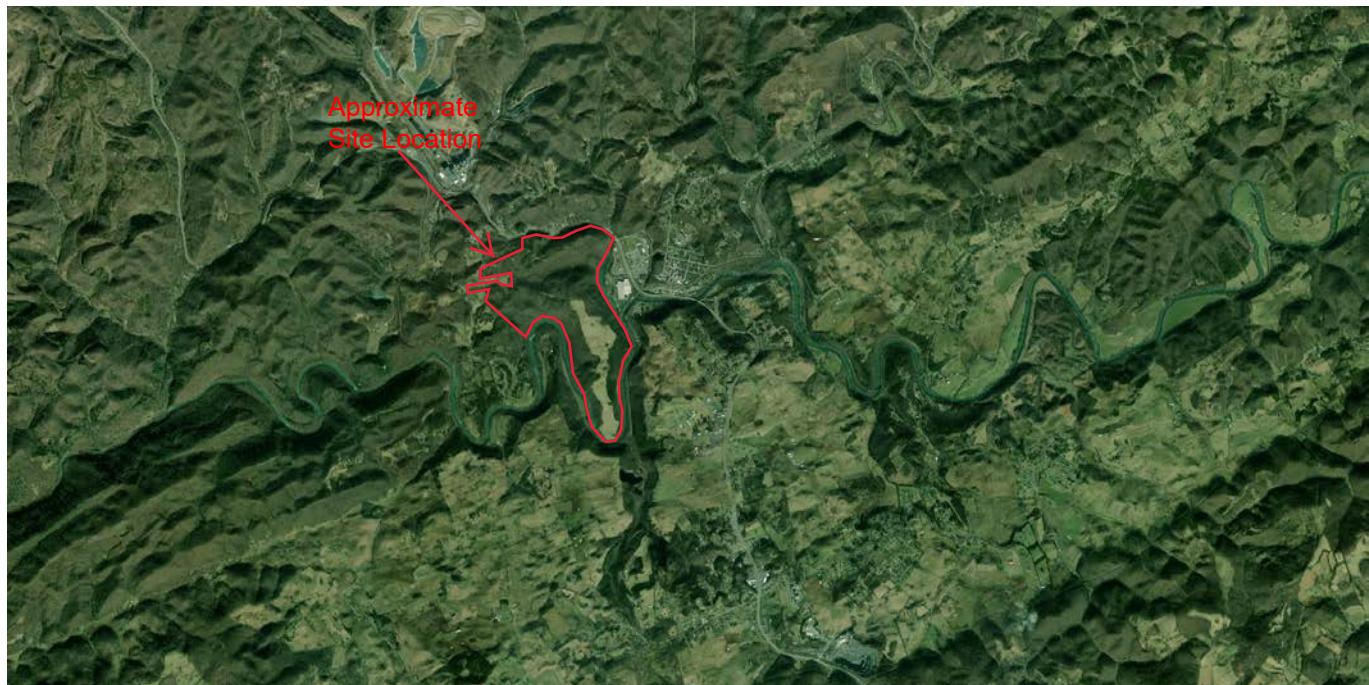
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Report Generated On: 05/03/2021

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Layers: VA Eagle Nest Buffers, VA Eagle Nest Locator

Map Center [longitude, latitude]: [-82.31523513793945, 36.904916080135976]

Map Link:

https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Buffers&layer=VA+Eagle+Nest+Locator&zoom=14&lat=36.904916080135976&lng=-82.31523513793945&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=World+Imagery+%28ESRI%29

Report Generated On: 05/03/2021

The Center for Conservation Biology (CCB) provides certain data online as a free service to the public and the regulatory sector. CCB encourages the use of its data sets in wildlife conservation and management applications. These data are protected by intellectual property laws. All users are reminded to view the [Data Use Agreement](#) to ensure compliance with our data use policies. For additional data access questions, view our [Data Distribution Policy](#), or contact our Data Manager, Marie Pitts, at mlpitts@wm.edu or 757-221-7503.

Report generated by [The Center for Conservation Biology Mapping Portal](#).

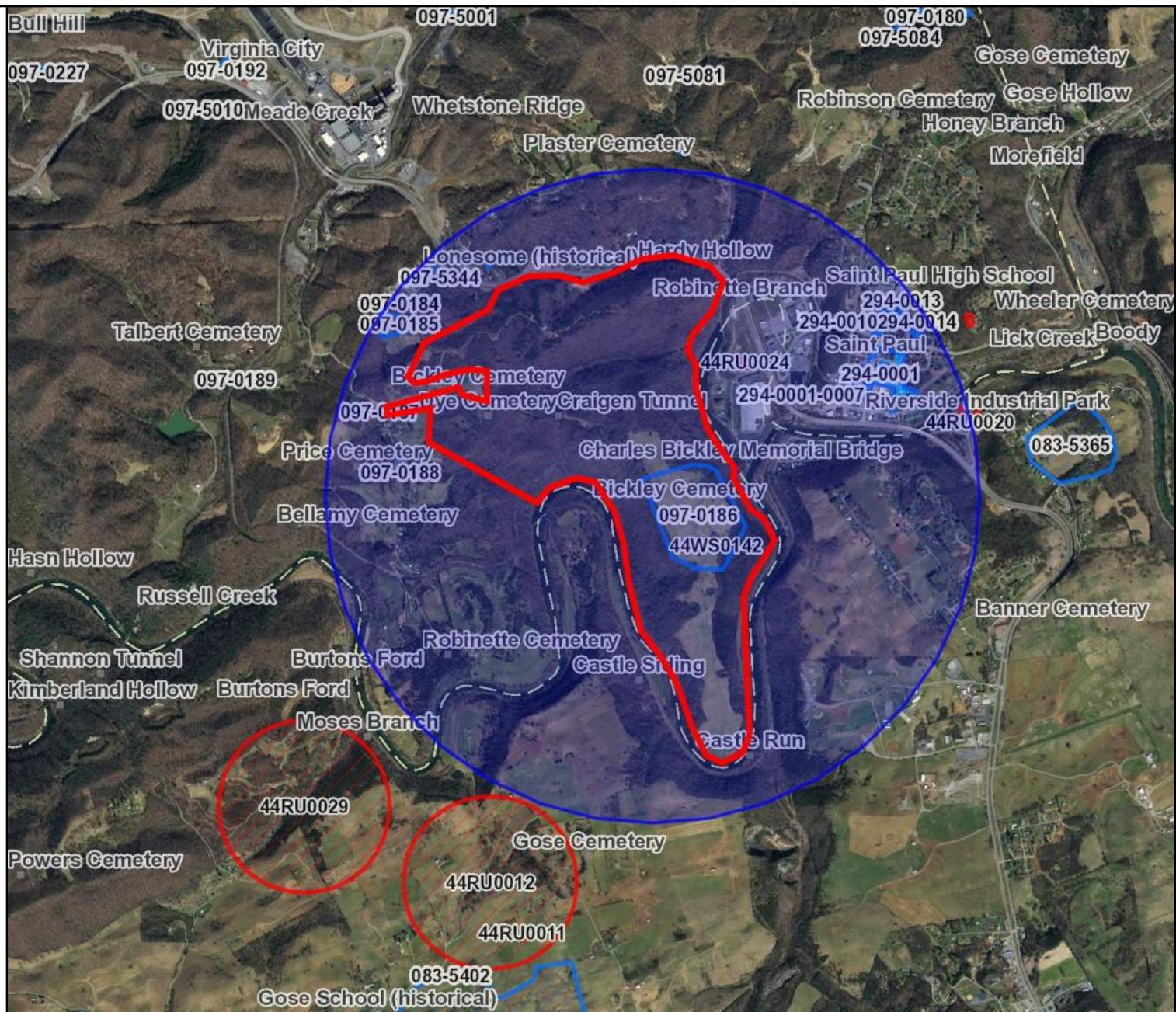
To learn more about CCB visit ccbbirds.org or contact us at info@ccbbirds.org

Appendix III

Cultural Resources Search Results

Legend

- Architecture Resources
- Architecture Labels
- Individual Historic District Properties
- Archaeological Resources
- Archaeology Labels
- DHR Easements
- USGS GIS Place names
- County Boundaries



Title: Clinch River - Wise County Parcels

Date: 4/21/2021

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Feet

0 600 1200 1800 2400
1:36,112 / 1"=3,009 Feet

Snapshot

Date Generated: April 21, 2021

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1775 - 1799, 1800 - 1825
Site Type(s): Dwelling, single
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status
Not Evaluated

Locational Information

USGS Quad: ST. PAUL
County/Independent City: Wise (County)
Physiographic Province: No Data
Elevation: No Data
Aspect: No Data
Drainage: No Data
Slope: No Data
Acreage: No Data
Landform: Other
Ownership Status: No Data
Government Entity Name: No Data

Site Components

Component 1

Category: No Data
Site Type: No Data
Cultural Affiliation: Euro-American
DHR Time Period: Colony to Nation, Early National Period
Start Year: 1775
End Year: 1799
Comments: No Data

Component 2

Category: No Data
Site Type: No Data
Cultural Affiliation: Euro-American
DHR Time Period: Early National Period
Start Year: 1800
End Year: 1825
Comments: No Data

Component 3

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: No Data
DHR Time Period: No Data
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:

No Data

Informant Data:

No Data

CRM Events

Event Type: Other

Project Staff/Notes:

Insufficient info.

Project Review File Number:

No Data

Sponsoring Organization:

No Data

Organization/Company:

Unknown (DSS)

Investigator:

VDHR

Survey Date:

1/16/1997

Survey Description:

A brief surface inspection was made. The site consists of 2 standing double chimneys and cellar hole (see Comments). The chimneys were measured and photographed, and field notes were made.

Current Land Use
Agricultural field**Date of Use**
No Data**Comments**
No Data**Threats to Resource:**

No Data

Site Conditions:

Surface Deposits Present But Subsurface Not Tested

Survey Strategies:

Informant

Specimens Collected:

No

Specimens Observed, Not Collected:

No

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository:

No Data

Permanent Curation Repository:

No Data

Field Notes:

Yes

Field Notes Repository:

Garrow &

Photographic Media:

No Data

Survey Reports:

No Data

Survey Report Information:

Cassedy, Daniel F. 1995, Wise county Archaeological Assessment. Garrow and Associates, Inc., Raleigh. Submitted to the Virginia Department of Historic Resources, Richmond.

Survey Report Repository:

Garrow & Assoc., Inc.

DHR Library Reference Number:

No Data

Significance Statement:

No Data

Surveyor's Eligibility Recommendations:

No Data

Surveyor's NR Criteria Recommendations, :

No Data

Surveyor's NR Criteria Considerations:

No Data

Event Type: Survey:Phase I/Reconnaissance

Project Staff/Notes:

No Data

Project Review File Number:

NWC-2

Sponsoring Organization:

No Data

Organization/Company:

Unknown (DSS)

Investigator:

Garrow & Assoc.-David Cassedy

Survey Date:

5/1/1995

Survey Description:

No Data

Threats to Resource:	No Data
Site Conditions:	No Data
Survey Strategies:	No Data
Specimens Collected:	No Data
Specimens Observed, Not Collected:	No Data
Artifacts Summary and Diagnostics:	
No Data	
Summary of Specimens Observed, Not Collected:	
No Data	
Current Curation Repository:	No Data
Permanent Curation Repository:	No Data
Field Notes:	No Data
Field Notes Repository:	No Data
Photographic Media:	No Data
Survey Reports:	No Data
Survey Report Information:	
No Data	
Survey Report Repository:	No Data
DHR Library Reference Number:	No Data
Significance Statement:	No Data
Surveyor's Eligibility Recommendations:	No Data
Surveyor's NR Criteria Recommendations, :	No Data
Surveyor's NR Criteria Considerations:	No Data

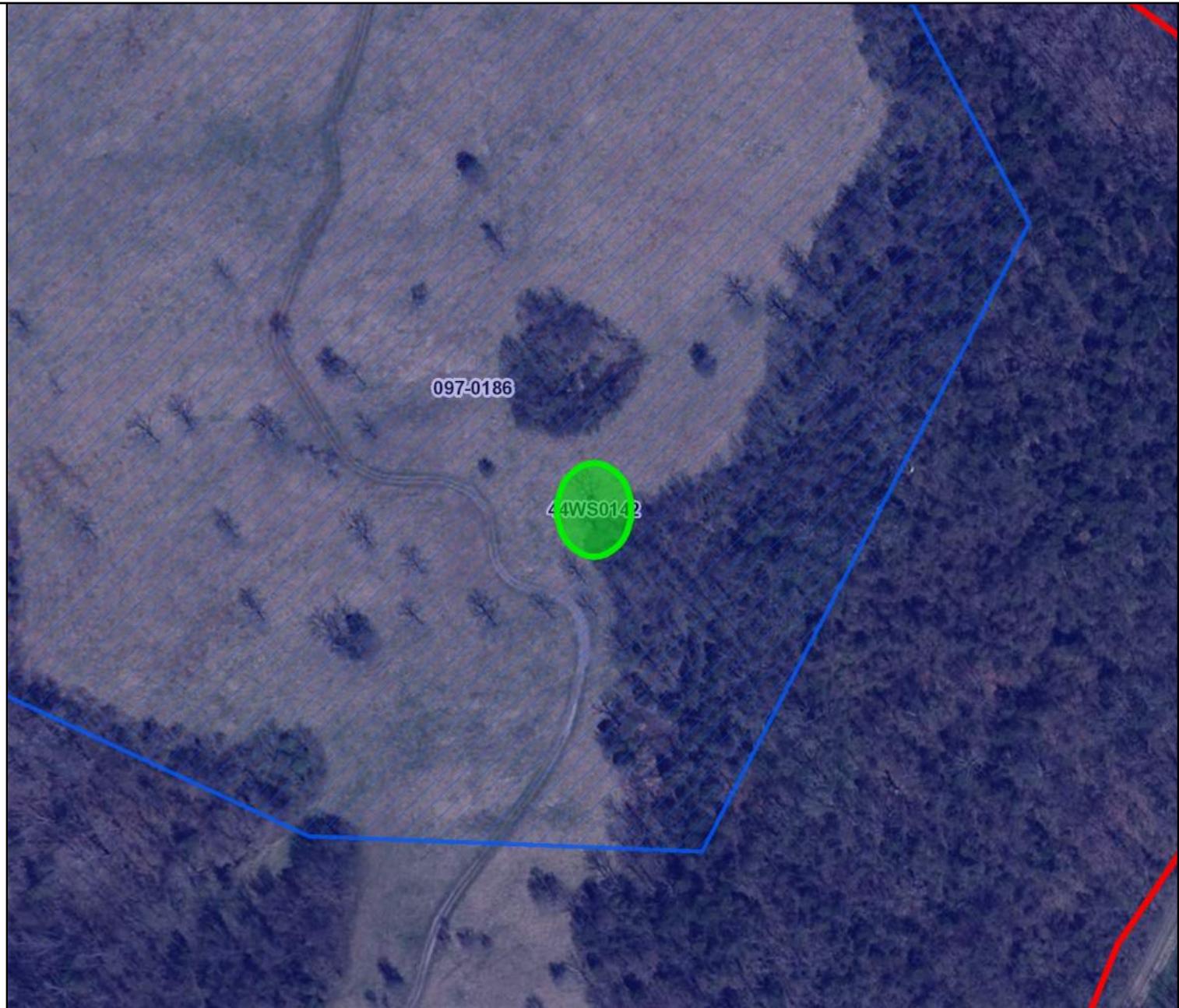
Legend

- Architecture Resources
- Architecture Labels
- Individual Historic District Properties
- Archaeological Resources
- Archaeology Labels
- DHR Easements
- USGS GIS Place names
- County Boundaries



Feet

0 50 100 150 200
1:2,500 / 1"=208 Feet

**Title: Archaeological Resources****Date: 4/21/2021**

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Property Information

Property Names

Name Explanation
Historic
Historic/Current

Name
Sainte Marie on the Clinch
Sugar Hill

Property Evaluation Status

DHR Staff: Potentially Eligible

Property Addresses

Current - Sugar Hill Lane

County/Independent City(s): Wise (County)

Incorporated Town(s): *No Data*

Zip Code(s): 24283

Magisterial District(s): *No Data*

Tax Parcel(s): 73-67

USGS Quad(s): ST. PAUL

Additional Property Information

Architecture Setting: Rural

Acreage: *No Data*

Site Description:

1994: The ruins of the house known as Sugar Hill is located on the end of a long hill overlooking the Clinch River. The site was once part of a 55,000-acre tract of land owned by Francis Pierre De Tubeuf, a French nobleman who purchased the land from an Englishman in July, 1792.

1994: Located three feet south of the south chimney is a solid stone foundation at ground level. It measures sixteen feet by twenty feet with a large stone and brick rubble pile at the south end. This was probably the kitchen building and quarters as historic photographs show a one-and-one-half story, gable-roofed building with a large chimney on the south end. Located approximately seventy-five feet north of the house ruins is a sixteen foot by twenty-four foot pole barn. Located approximately 150 feet south of the ruins is a one-and-one-half-story, gable-roofed barn inaccessible due to dense brush and scrub trees.

Surveyor Assessment:

1994: The house ruins is an extremely important site to the history of Wise County. Francis Pierre De Tubeuf, the Frenchman who most likely built the house, mortgaged part of his land to the State of Virginia shortly before he met an untimely death. That land later became part of the central area of Wise County. Also the ruins are important because they are the only remains of what was the oldest house in Wise County. The county was still a wilderness when the first coal-company town was built at Stonega in 1896, 100 years after the probable construction of Sugar Hill.

Surveyor Notes: Mr. Frank Kilgore purchased the property in late 1994, and it is not clear what he intends to do with the house ruins and standing chimneys. The existing remains of the house together with the documentary evidence about the land transactions involving the site in the late 1700s make this property an ideal candidate for on-site archaeological research.

1996: The site is a part of tract of land that was first settled in 1772 - the first documented settlement in what is now Wise County. The house, which burned in June 1976, was occupied through the nineteenth and in to the twentieth century. First a frontier farm occupied by a man named John English from 1772 to 1787, then a French settlement from 1791 to 1795, and later home of a maple sugar industry - hence the name Sugar Hill - the property on which the ruin is located possesses significant links to the county's and the area's history.

The site is listed as a significant site in two reports: one an architectural survey of the county, and the other an archaeological assessment of the county, both completed in 1995. Ed Tolson, the architectural historian who surveyed historic structures in the county in 1994/95, estimated the structure was built about 1795, but there is some evidence to suggest that it may have been built earlier. He suggested that the property is potentially eligible for listing on the National Register under Criterion D on the local level in the area of archaeology. Garrow & Associates assessed the property as being "potentially very significant given its age and apparent historic associations." (Garrow 1995:33) The following description of the site is taken from both reports.

Surveyor Recommendation: *No Data*

Ownership

Ownership Category
Private

Ownership Entity
No Data

Primary Resource Information

Resource Category:	Domestic
Resource Type:	Single Dwelling
NR Resource Type:	Building
Historic District Status:	<i>No Data</i>
Date of Construction:	Ca 1795
Date Source:	Site Visit/Written Data
Historic Time Period:	Early National Period (1790 - 1829)
Historic Context(s):	Architecture/Landscape, Domestic, Subsistence/Agriculture
Other ID Number:	<i>No Data</i>
Architectural Style:	Other
Form:	<i>No Data</i>
Number of Stories:	2.0
Condition:	Demolished
Threats to Resource:	Demolition
Architectural Description:	

1994: The ruins of the house known as Sugar Hill combined with the written record and historic photographs reveal much about the house that was burned by vandals in June 1976. Probably built ca. 1795, it was a two-story, three-bay gable-roofed dwelling with exterior-end chimneys with free-standing stacks. It was covered with weatherboard siding and had six-over-six, double-hung, wood-sash windows. It was probably a heavy-timer frame dwelling of false-plate construction. The two surviving chimneys also reveal much about the use of the interior space of the house. The north chimney has two angled fireplaces indicating two chambers on this end of the central hall. The south chimney has one fireplace that is much larger than either of the fireplaces on the north chimney. There is also a fireplace on the second-floor level of each chimney. The remaining stone foundation suggests a full basement under the house. Condition: Ruinous (chimneys only).

Secondary Resource Information

Secondary Resource #1

Resource Category:	Agriculture/Subsistence
Resource Type:	Barn
Date of Construction:	Ca
Date Source:	<i>No Data</i>
Historic Time Period:	Early National Period (1790 - 1829)
Historic Context(s):	Architecture/Landscape, Domestic, Subsistence/Agriculture
Architectural Style:	No Discernable Style
Form:	<i>No Data</i>
Condition:	Demolished
Threats to Resource:	Demolition
Architectural Description:	

1994: Sixteen by twenty-four foot pole barn.

Number of Stories:	1
---------------------------	---

Secondary Resource #2

Resource Category:	Agriculture/Subsistence
Resource Type:	Barn
Date of Construction:	Ca
Date Source:	<i>No Data</i>
Historic Time Period:	Early National Period (1790 - 1829)
Historic Context(s):	Architecture/Landscape, Domestic, Subsistence/Agriculture
Architectural Style:	No Discernable Style
Form:	<i>No Data</i>
Condition:	Demolished
Threats to Resource:	Demolition
Architectural Description:	

1994: One and one-half story, gable-roofed barn.

Number of Stories: 1.5

Historic District Information

Historic District Name: No Data

Local Historic District Name: No Data

Historic District Significance: No Data

CRM Events

Event Type: DHR Staff: Potentially Eligible

DHR ID: 097-0186

Staff Name: DHR Evaluation Committee

Event Date: 1/16/1997

Staff Comment

The Archeological Subcommittee of DHR's National Register Evaluation Committee met to consider the eligibility of Site 44WS142. The Committee finds that this site is potentially eligible under criterion D. However, the referenced PIF fails to provide sufficient information to allow us to determine conclusively the site's eligibility.

Item 6 of the PIF, General Archaeological Description indicates that there should be a discussion of the archeological deposits present at the site and their level of integrity. The PIF provides no documentation of archeological deposits. Because above-ground architectural remains are present, the Committee agrees that some degree of horizontal integrity exists. However, the presumption that a rural site occupied up to the 1950s will retain a degree of vertical integrity sufficient for National Register eligibility is not justified, in our opinion, on the basis of visual inspection alone.

It is the opinion of the Committee that subsurface testing will be needed to document the presence and nature of intact archeological deposits, to date the deposits to a specific period of significance and to establish site boundaries. The amount of testing may be limited to a level sufficient to document the presence of archeological deposits, their integrity, and the proposed site boundaries. We agree that this potentially eligible site is worthy of protection.

Event Type: Other

Project Review File Number: No Data

Investigator: Egloff, Keith

Organization/Company: Unknown (DSS)

Photographic Media: No Data

Survey Date: 1/7/1997

Dhr Library Report Number: No Data

Project Staff/Notes:

I reviewed the PIF and believe the property qualifies for listing on the Virginia Landmarks Register and the National Register of Historic Places.

The property has a very early and unusual history, and impressive ruins with amazing integrity. The ground surface around the ruins shows no indication of disturbance, therefore, the potential for subsurface integrity of other cultural features is great.

Limited testing may be needed to complete a nomination, mainly to establish property boundaries, but also to recover a sample of artifacts. A discussion of artifacts would broaden the description and significance sections.

Event Type: Other

Project Review File Number: No Data

Investigator: Eaton, Dr. Ethel R.

Organization/Company: Unknown (DSS)

Photographic Media: No Data

Survey Date: 12/31/1996

Dhr Library Report Number: *No Data*

Project Staff/Notes:

I have received and reviewed the Preliminary Information Form (PIF) completed for the referenced property. The PIF was prepared by Sandra Williams (no date). I have also considered the opinion of the Regional Archeologist, as presented in Tom Klatka's memo of December 19, 1996. I concur with his opinion that this archeological site is potentially significant. Further investigations (Phase II or evaluation) is needed to determine conclusively the site's eligibility in terms of National Register criteria. Specifically, more information is needed on site boundaries, integrity and the nature of the subsurface deposits.

Event Type: Other

Project Review File Number: *No Data*

Investigator: Klatka, Thomas

Organization/Company: Unknown (DSS)

Photographic Media: *No Data*

Survey Date: 12/19/1996

Dhr Library Report Number: *No Data*

Project Staff/Notes:

"Enclosed is a copy of a completed Preliminary Information Form for the "Sainte Marie on the Clinch," or "Sugar Hill," archaeological property. I reviewed the PIF, but I did not complete an evaluation rating sheet due to incomplete information.

Sandra Williams has provided a well-researched overview of the historic context for the property, as well as an informed description of the property. Site inspections completed during the DHR S&P Project in Wise County resulted in useful information. Based on the site inspections, the property has the potential to contain intact subsurface deposits. Ms. Williams' research relates an unusual and interesting property history.

Earlier this year I discussed this property with Sandra Williams. Based on our telephone conversation I believe she submitted the PIF with the idea a "good review" would encourage the inclusion of funding for an archaeological assessment in a future ISTEA grant application. I agree the property has the potential to be eligible for listing on the NRHP. An objective, conclusive determination of eligibility will require additional information regarding horizontal and vertical boundaries, the nature of the artifact and ecofact remains, and the degree of subsurface integrity. In short, an archaeological boundary definition and significance evaluation are necessary.

Event Type: PIF

Project Review File Number: 44WS0142

Investigator: Williams, Sandra

Organization/Company: Unknown (DSS)

Photographic Media: *No Data*

Survey Date: 9/10/1996

Dhr Library Report Number: *No Data*

Project Staff/Notes:

Listing on the National and Virginia Registers would provide recognition of this property as an important cultural resource. That recognition will encourage the property owner's private stewardship of the resource. It could also help to increase the public's awareness of the site's history and facilitate access to funding to promote knowledge of the history of the site and its connection to other historic sites in the area and to the country's history. This request is in anticipation of submitting an application for ISTEA funds.

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: 097-0186

Investigator: Tolson, Ed

Organization/Company: Unknown (DSS)

Photographic Media: *No Data*

Survey Date: 4/1/1994

Dhr Library Report Number: *No Data*

Project Staff/Notes:

No Data

Bibliographic Information

Bibliography:

No Data

Property Notes:

No Data

Legend

- Architecture Resources
- Architecture Labels
- Individual Historic District Properties
- Archaeological Resources
- Archaeology Labels
- DHR Easements
- USGS GIS Place names
- County Boundaries

**Title: Architecture Labels****Date: 4/21/2021**

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Feet

0 200 400 600 800
1:9,028 / 1"=752 Feet

Property Information

Property Names

Name Explanation
Historic/Current

Name
Austin, Flem, House

Property Evaluation Status

Not Evaluated

Property Addresses

Current - State Route 611

County/Independent City(s): Wise (County)

Incorporated Town(s): No Data

Zip Code(s): No Data

Magisterial District(s): No Data

Tax Parcel(s): No Data

USGS Quad(s): ST. PAUL

Additional Property Information

Architecture Setting: Rural

Acreage: No Data

Site Description:

The 1.75-acre site gently slopes northwest to southeast with a small yard on the north and east between the house and the two highways.

Located approximately ten feet from the southeast corner of the house is a one-story, frame with board-and-batten door on the north facade. Attached to the south end of the barn is a one-story, gable-roofed, log building measuring ten feet by fifteen feet. Constructed of used materials by the owner's son fifteen years ago, it is built of round logs joined with a square notch.

Surveyor Assessment:

The Flem Austin House is a good example of the continued use of boxed construction as an alternative building method. The two-over-two, double-hung, wood-sash windows are an unusual feature of this late 1930s house.

Surveyor Recommendation: No Data

Primary Resource Information

Resource Category: Domestic

Resource Type: Single Dwelling

NR Resource Type: Building

Historic District Status: No Data

Date of Construction: 1936

Date Source: Site Visit/Owner

Historic Time Period: World War I to World War II (1917 - 1945)

Historic Context(s): Domestic

Other ID Number: No Data

Architectural Style: Other

Form: No Data

Number of Stories: 1.0

Condition: Fair

Threats to Resource: None

Architectural Description:

Architecture Summary: The four-bay house, measuring twenty-eight feet square, was built as a single dwelling with two doors on to the east porch. Along the east facade is a full-length, one-story, five-bay, shed-roofed porch with tapered, wood box columns and square balusters and a simple handrail.

Exterior Components

Component

Component Type

Material

Material Treatment

Chimneys	Interior	Brick	Other
Porch	1-story, 5-bay	Wood	Other
Windows	Sash, Double-Hung	Wood	2/2
Foundation	Piers	Brick	Other
Structural System and Exterior Treatment	Other	Wood	Other
Roof	Gable	Metal	V-Crimp

Secondary Resource Information

Secondary Resource #1

Resource Category: DSS Legacy
Resource Type: Shed
Date of Construction: *No Data*
Date Source: *No Data*
Historic Time Period: *No Data*
Historic Context(s): Domestic
Architectural Style: *No Data*
Form: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
 No Data
Number of Stories: *No Data*

Secondary Resource #2

Resource Category: Agriculture/Subsistence
Resource Type: Barn
Date of Construction: *No Data*
Date Source: *No Data*
Historic Time Period: *No Data*
Historic Context(s): Domestic
Architectural Style: *No Data*
Form: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
 No Data
Number of Stories: *No Data*

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*

Investigator: VDHR-Tolson
Organization/Company: Unknown (DSS)
Photographic Media: *No Data*
Survey Date: 4/1/1994
Dhr Library Report Number: *No Data*
Project Staff/Notes:
No Data

Bibliographic Information

Bibliography:

No Data

Property Notes:

Name: Kate Price-Austin

Address 1: PO Bx 266

City: St. Paul

State: Virginia

ZIP: 24283

Owner Relationship: Owner of property

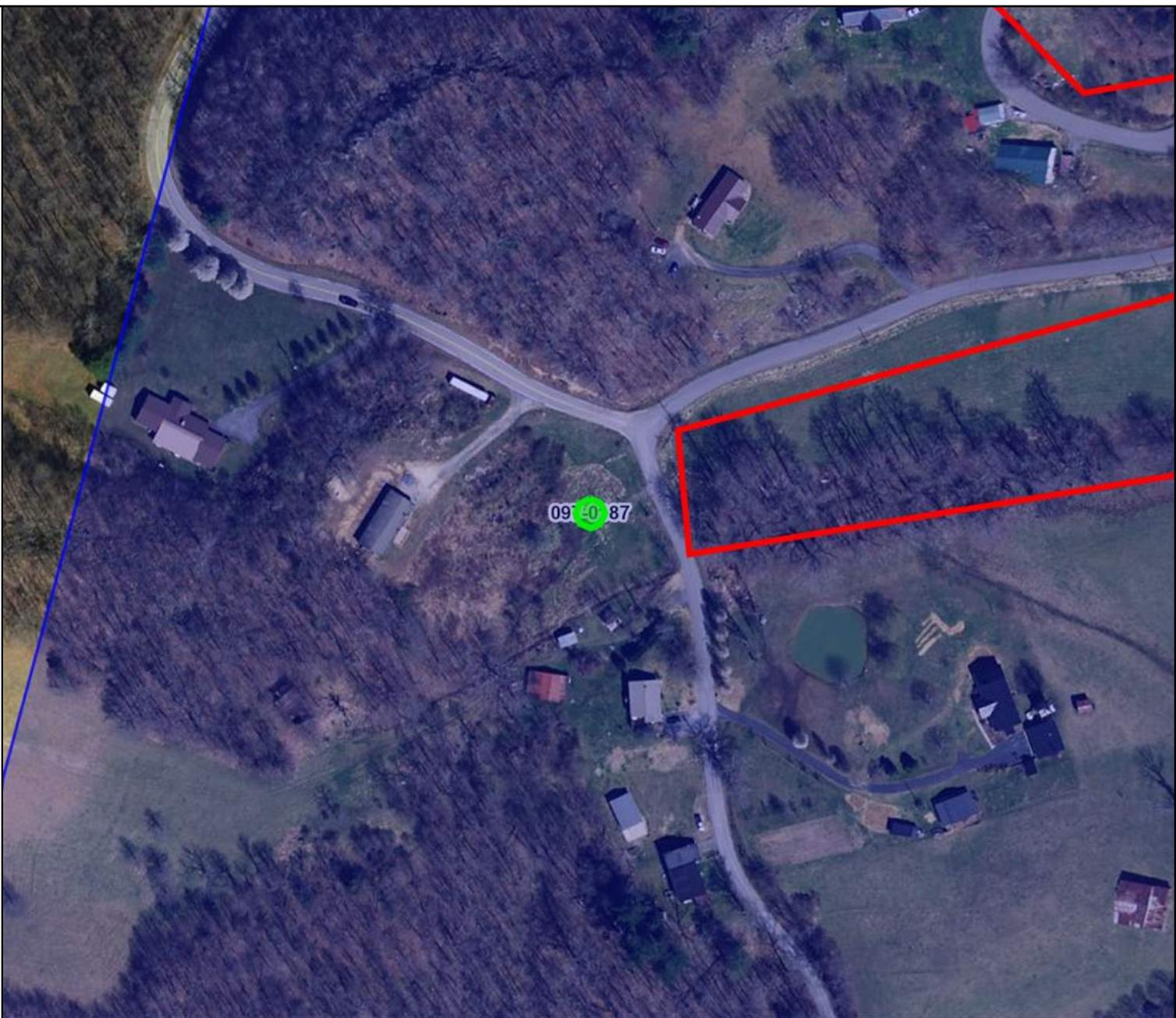
Legend

- Architecture Resources
- Architecture Labels
- Individual Historic District Properties
- Archaeological Resources
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Feet

0 50 100 150 200
1:2,500 / 1"=208 Feet

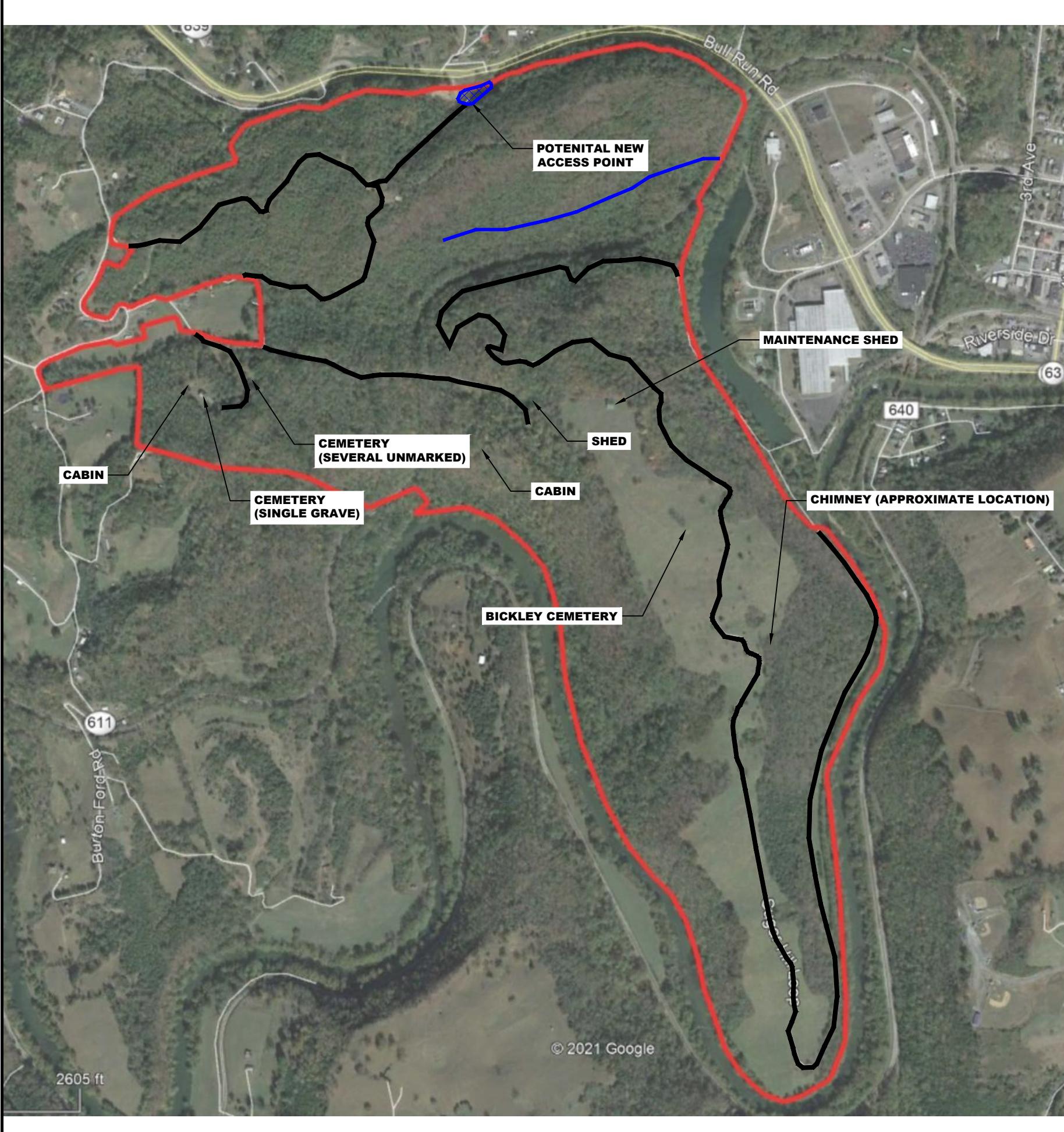
**Title: Architecture Labels****Date: 4/21/2021**

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Appendix IV

Site Features Map



CLINCH RIVER WISE COUNTY PARCELS	
DESKTOP REVIEW FIELD NOTES AUSTIN BROCKENBROUGH	
ECS REVISIONS	
ENGINEER KND	DRAFTING CJK
SCALE AS SHOWN	
PROJECT NO. 47:11947	
SHEET 1/1	
DATE 07/08/2021	

N

W E S

SCALE (IN FEET)

400 800

800 0 800

APPENDIX B

PUBLIC NEED AND GOALS SURVEY RESULTS, DEC.
2021 – MARCH 2022

PUBLIC NEED AND GOALS SURVEY RESULTS

(DECEMBER 2021 – MARCH 2022)

As part of the planning process for the Clinch River State Park (CRSP), the general public was surveyed about their desired goals and objectives of the CRSP. The survey results will be incorporated into the programming and conceptual design of the park, along with DCR input, site evaluation and mapping, Advisory Committee workshop feedback, and stakeholder survey responses.

Methodology

The public was invited to complete an online survey through the SurveyMonkey platform about the programming needs of the region and goals for the CRSP sites. The survey was open from December 1, 2021 through March 12, 2022, and a total of 170 people responded. The survey was advertised during a December 16, 2021 public meeting and on DCR's social media platforms.

Results Summary

The following are key findings from the survey:

- Virginia State Parks are highly visited, with almost 95% of respondents having visited one in the last year, and over 85% of respondents visiting at least three times a year. Most respondents have visited 1-6 different state parks, with the average total being three separate state parks.
- The top four themes identified as making this park unique and special are its access to the Clinch River, views of surrounding natural areas, biodiversity in the Clinch River and area, and rare and endangered species. These are the same top four themes identified in the Sept. 2021 Advisory Committee survey.
- The top reasons identified as important to the park are directly connected to the characteristics selected as unique to the park. The top three identified important characteristics of the park are access to the Clinch River (77%), conservation of a global ecological treasure (75%), and opportunities for solitude in a natural area (74%). The #1 and #2 reasons match the responses from the Advisory Committee Sept. 2021 survey, but the Advisory Committee survey found the #3 reason to be education opportunities. Educational opportunities was the #7 response in the public survey.
- Desired facilities for the region and the Clinch River SP site track closely together. The greatest needs are for trails, camping, river access, and picnicking opportunities. There is limited perceived need for equestrian trails, disc golf, or local style park amenities like open play lawns, recreational aquatics, and multi-use trails. These results are similar to the results of the Sept. 2021 Advisory Committee Survey.
- A few priorities rose to the top for the public's preferences for amenities/facilities that should not be included in the development of Clinch River State Park: ATV and other motorized recreational vehicles, large events, intensive development, equestrian trails, and recreational aquatics. These results are similar to the input received from the Sept. 2021 Advisory Committee Survey.

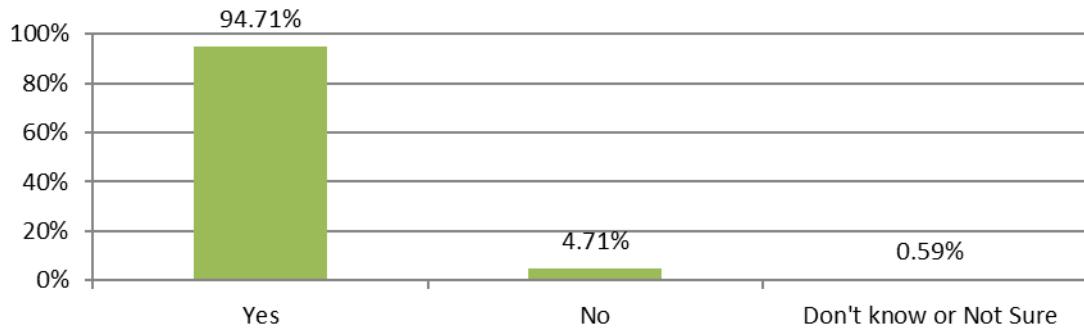
- The impacts of Clinch River State Park on the regional community that are most desired are: recreational opportunities for residents, support of local businesses, and increased visitation to the area. These are the same top three identified by the Advisory Committee in the Sept. 2021 survey.
- The three highest priority goals for the park, as identified in the survey, are to preserve and enhance the natural resources of the site, provide a range of overnight and day use recreational opportunities, and be a model of environmentally sensitive design. The public and the Advisory Committee survey both found that preserving and enhancing natural resources of the site was the #1 goal. All goal options are supported to varying levels.

The consensus of the survey is that the site should be developed in an environmentally sensitive way that prioritizes natural resource conservation and enhancement, access to the Clinch River, and the natural beauty, solitude, and views of the site. The top regional recreation needs align with the respondents' preferred amenity development of the site, focusing on trails, river access, camping and cabins, interpretation, and education. Those surveyed would like the focus of the park to be on unique site features, rather than destination amenities like a pool, splash-pad, or zip line. The site should appeal to single and multi-day visitors as well as area residents. The park should attract visitors to the area and integrate with the other regional resources and attractions, encouraging and supporting economic development and local businesses.

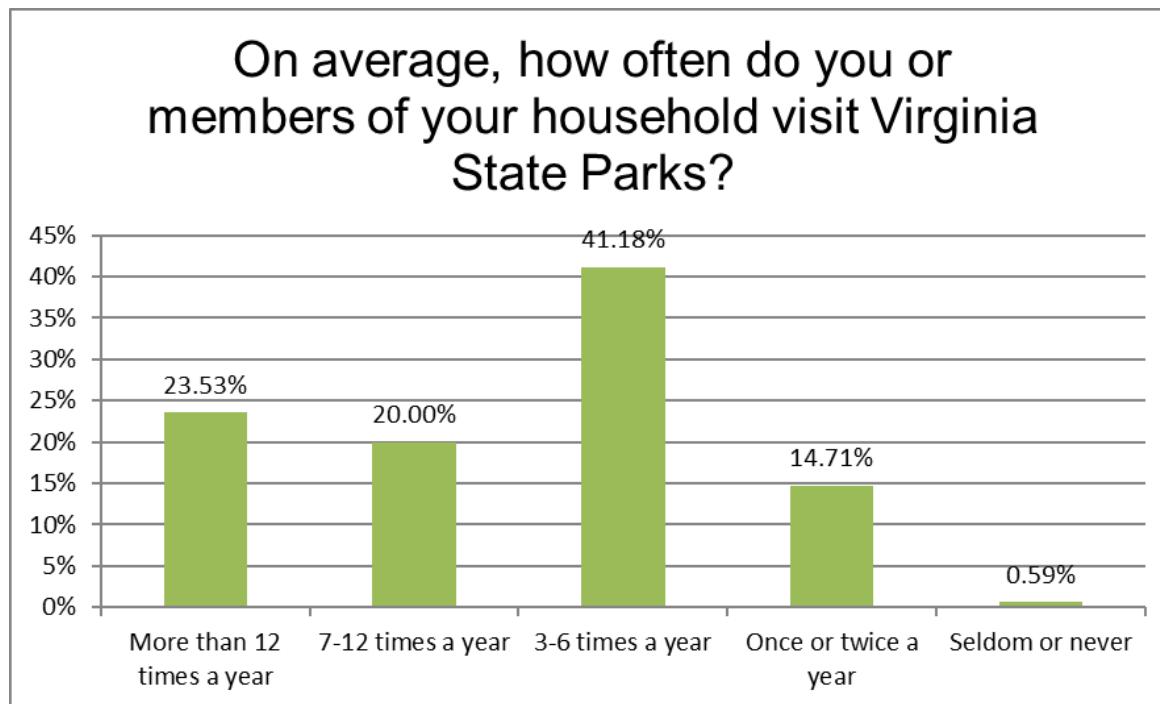
Survey Questions

Q.1 Have you or a member of your household visited a Virginia State Park in the last 12 months?

Have you or a member of your household visited a Virginia State Park in the last 12 months?

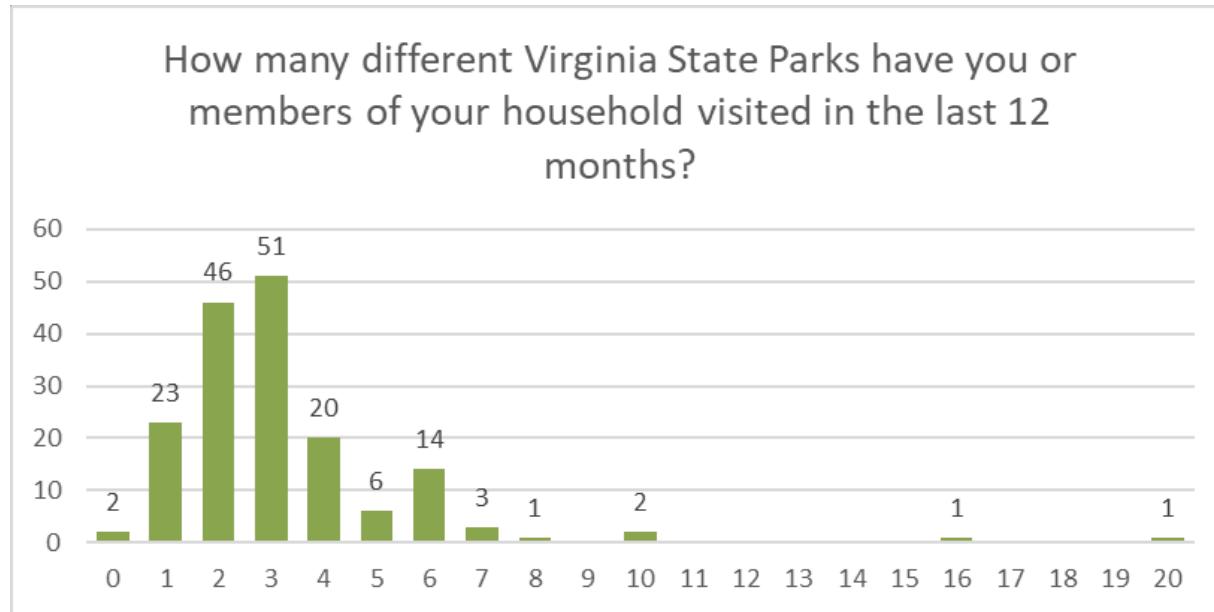


Q.2 On average, how often do you or members of your household visit Virginia State Parks?

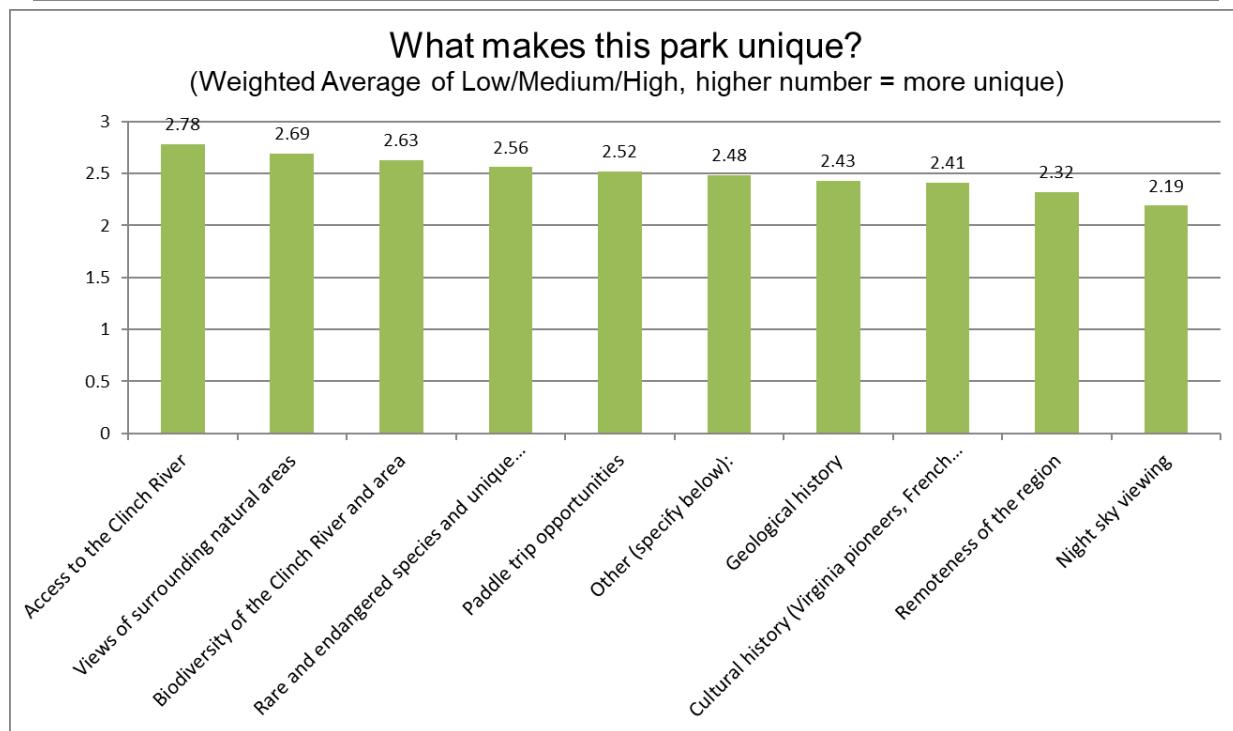
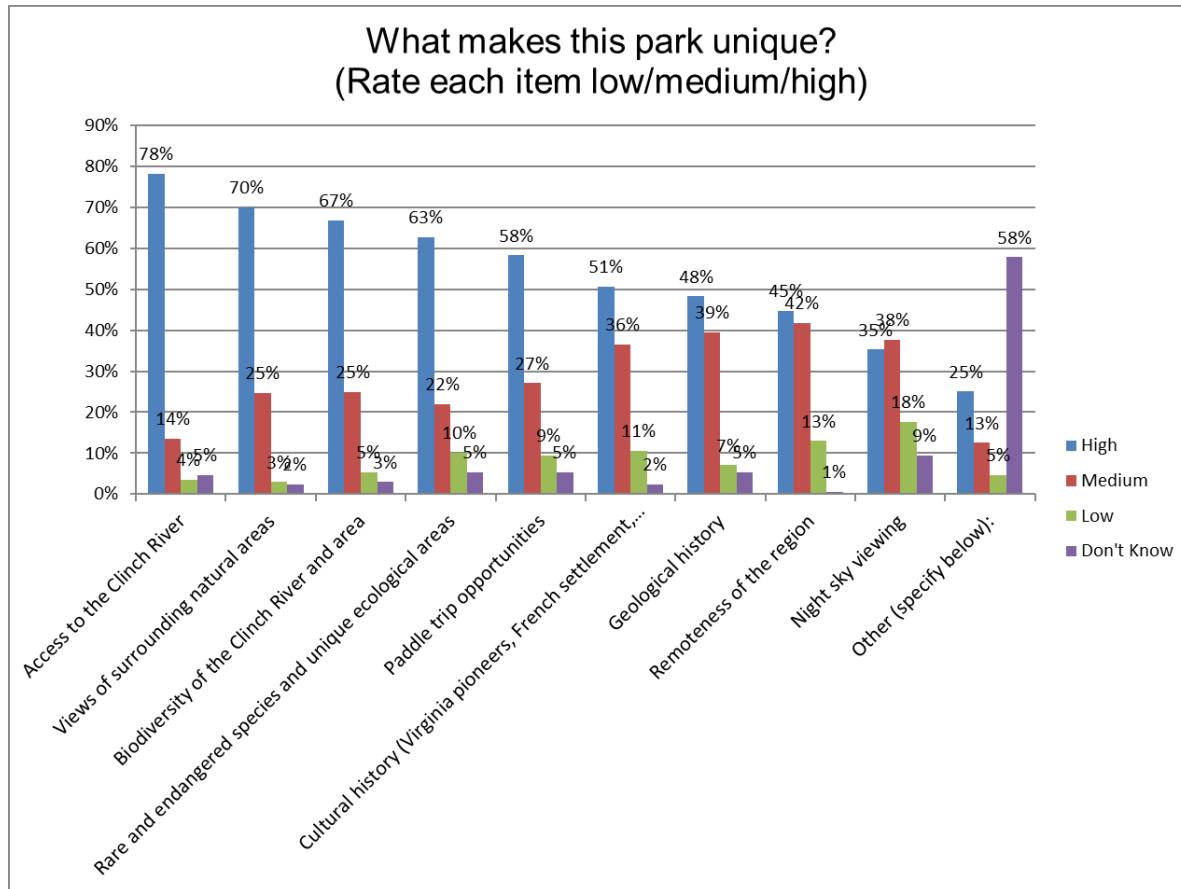


Q.3 How many different Virginia State Parks have you or members of your household visited in the last 12 months?

The average number of parks visited is 3.2 parks.

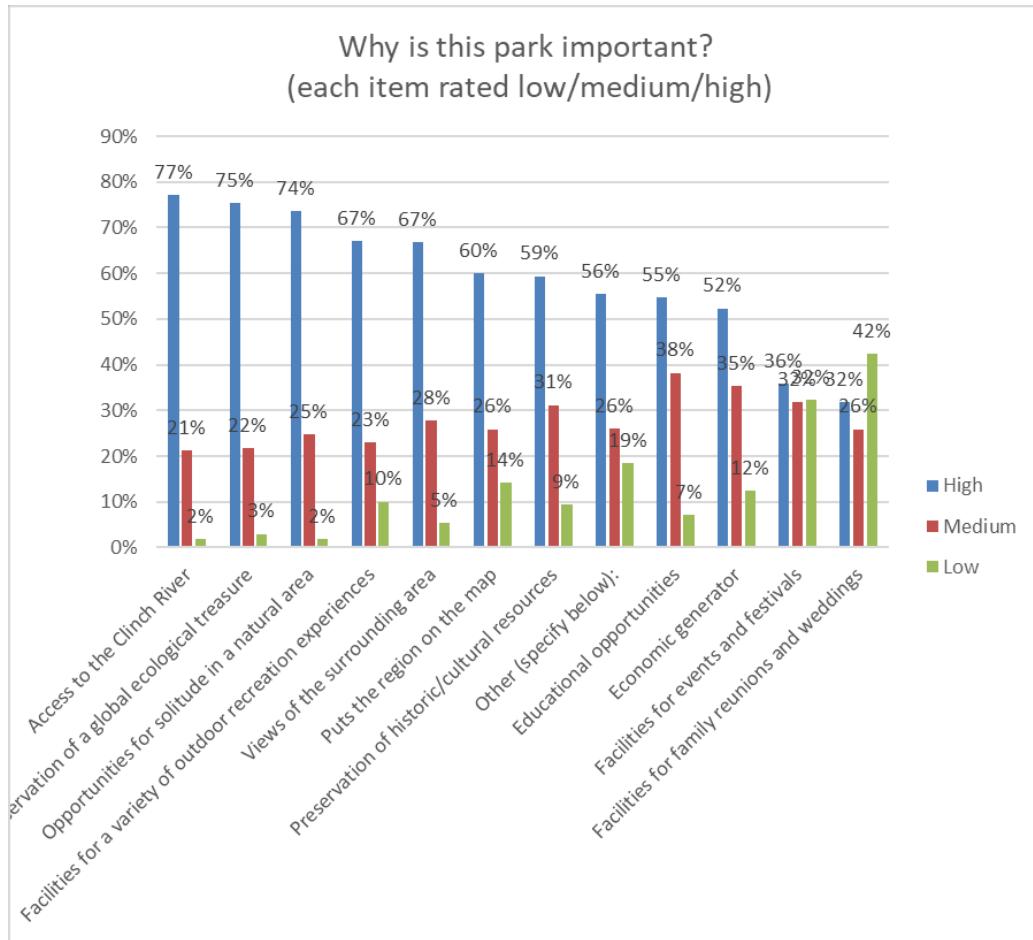


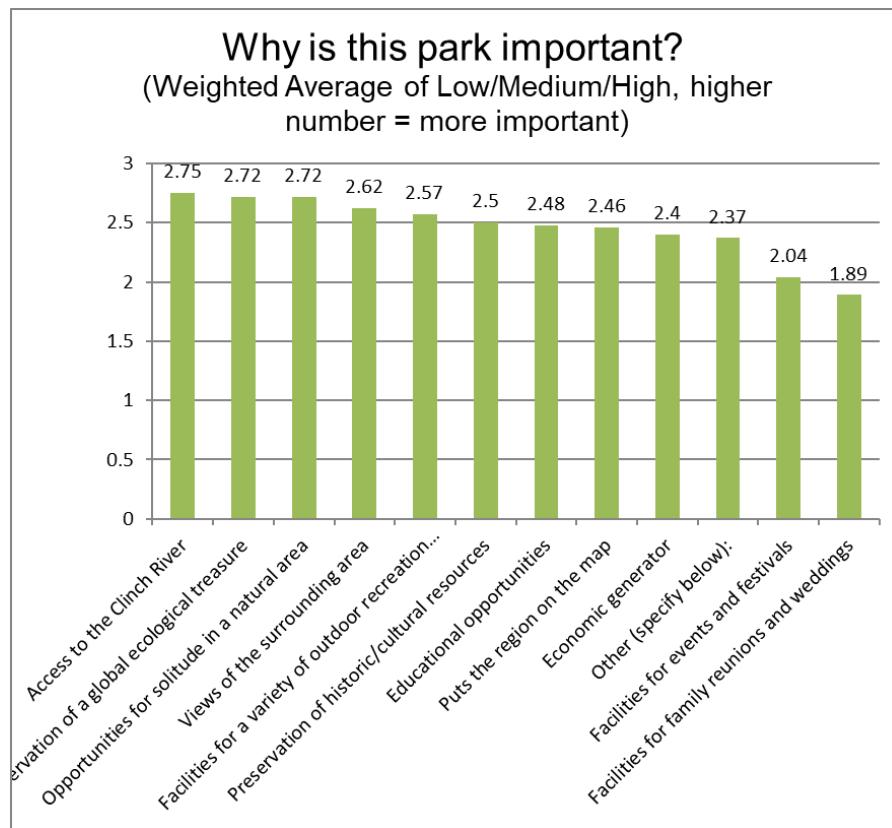
Q.4 What makes this park unique? (rate each item low/medium/high)



Other:	
Fishing	
Hunting	
Uniqueness of the river. Geographic location close to other attractions in the area. Access	
access to river interesting camping options and the story of the area make for a great trip for me, my family , and the scouts i manage too	
Fish stocking & management	
Distance from my home	
Walking, hiking, biking for seniors alone river	
Pre covid when my grands stayed with me we used it for the wonderful educational events.	
Views of Clinch River Valley features beautiful surrounding farmland and mountains. Rich cultural heritage exist and only needs to be tapped into to draw population from Tri-Cities, surrounding area, and beyond. Dungannon area is most beautiful. This community abounds with places of great natural interest and intrigue with some development of campsites, cabins and lodging Dungannon is most impressive for tourist to come.	
The ability to help grow our surrounding counties.	
More hiking trails	
I would like to float from the Russel County ST Park to my 3 acre island at Dungannon, Va - we are seeing at my place a lot more Kayaking than we did 5 years ago and I'm glad for it = the river is beautiful and more people should get to see it.	
Camping opportunities	
Have not been to the new CR park	
fishng	
Turn outs on road and trails for birdwatching.	
Parks are subject to vandalism, trash and graffiti not attractive to visit	
proximity to my home	
No parking fees at some of the access points is nice but I believe some fees are needed.	
Would like to horse back riding	
Fishing	
Great walking trails close to my home	
Great hiking	
Fishing, birding, viewing of other wildlife	
Year-round hiking	
Fungal diversity	
Music amphitheatre	
historic opportunity for quality outdoor recreation.	
Bike trails	
More mountain bike trails!	
Adjacent small towns	

Q.5 Why is this park important? (rate item characteristic low/medium/high)




Other:

The fact that it is one of the most diverse in the country.

Fishing

We need more protected space.

Wildlife watching

Na

Camping is needed

History

Dungannon area has numerous natural interest sites that need to be developed for tourism to abound in this most beautiful area of The Clinch River Valley. Places of great interest such as: Sinking Creek to Miller Yard, Accessible launch areas for easier/shorter kayaking, canoeing or floating river. Hanging Rock to Falls of Little Stoney, Locations available for easy camping and hiking, Lodge and cabin development to provide longer stays. Osborne Ridge to High Knob area are full of opportunities to enrich. Proximity to Tri-Cities Airport and highway system is easy access for National Attention.

I own a 3 acre Island in the Clinch River at Dungannon and I am so pleased to see that the State of VA has taken an interest in the Beautiful Clinch River

Accessible recreation activities for locals

Better access to fishing opportunities on the river

Fishing

Feeling of peace and solitude

Nice fishing

Minimal impact of buildings and development

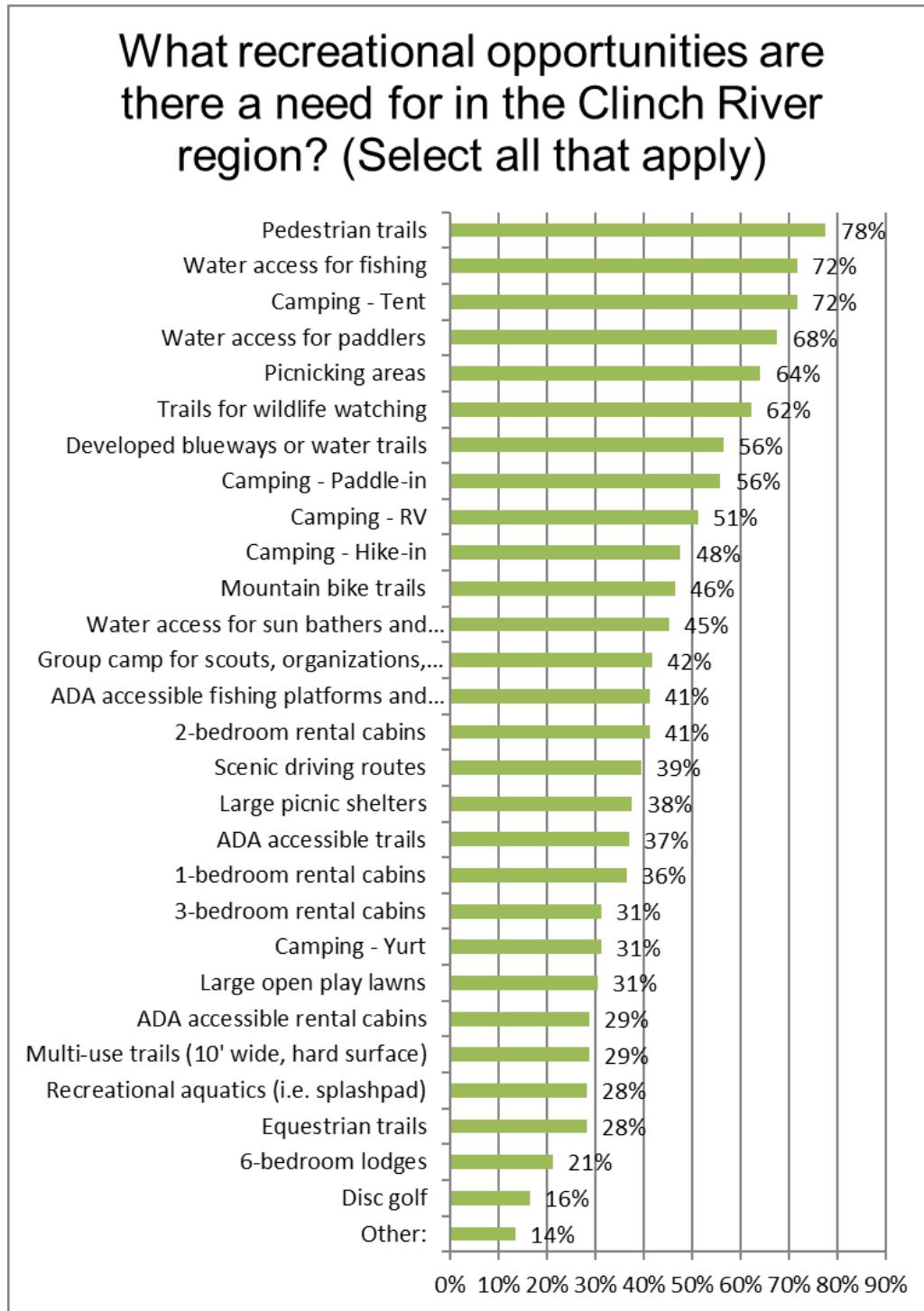
Camping facilities

some untapped fishing opportunities

Mountain biking!

Q.6 What recreational opportunities are there a need for in the Clinch River region? (Select all that apply)

The chart below shows the weighted total of each recreational opportunities that are considered as a need for in the Clinch River region.



Other:

We need things for kids, camping, fishing,splash pads,play area

Educational signs

Maps

Restrooms & trash cans

Local History and Heritage Sites.

MORE TRASH CANS AND RECYCLING BINS ALONG TRAILS

Advertise the beauty of the river

Should be open for hunting

Clean up the trash

signage & protection for rare plants & animals

I didn't check items we already have such as scenic driving & ped. trails... could have been misinterpreting the question.

There needs to be a healthy balance of developed and undeveloped land however. Not developed land is more appealing but I agree that some development for ADA accessible areas is a necessity.

Equestrian campground

Minimal impact and construction keep this park "non-commercial"

Keep it as wilderness

More loop trails @ 3-6 mile length

The splash pad is sorely needed!

Ecotourism

Visitor center and a nature center for children to have learning opportunities. My children want a gift shop with vending machine lol. I want to suggest a splash pad, a nature playground, mini golf and rail bikes if an old railway is available.

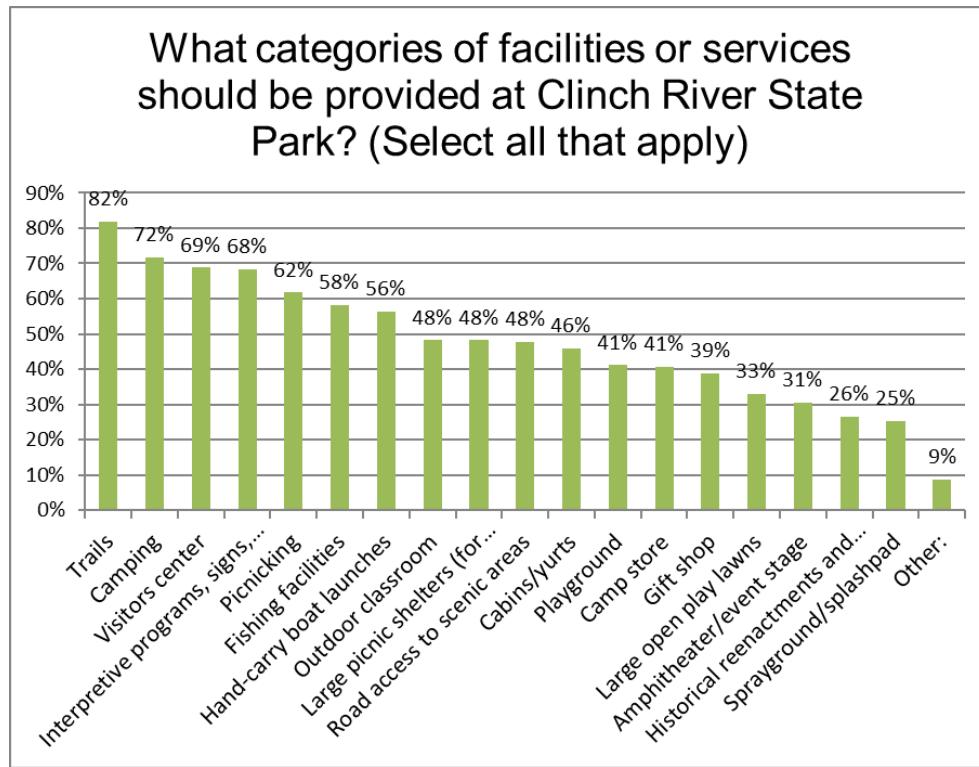
Mycological education signage

All of these are needed. Hungry Mother is an excellent model of a great park.

Music amp theatre

Tubing

Q.7 What facilities or services should be provided at Clinch River State Park tracts? (select all that apply)



Other:

Camping would be great for rvs

Museum

First-aid shack

Dog park!

Primitive camping

Horse facilities to include trailer parking, drinking water access, bathrooms, overnight camping.

Fishing

Education/conservation information

Disc golf

Make it a new model for a state park non-commercial quiet, beautiful,.

Historic interpreters, yes, esp. those willing to give historical hiking tours. Reenactments, no.

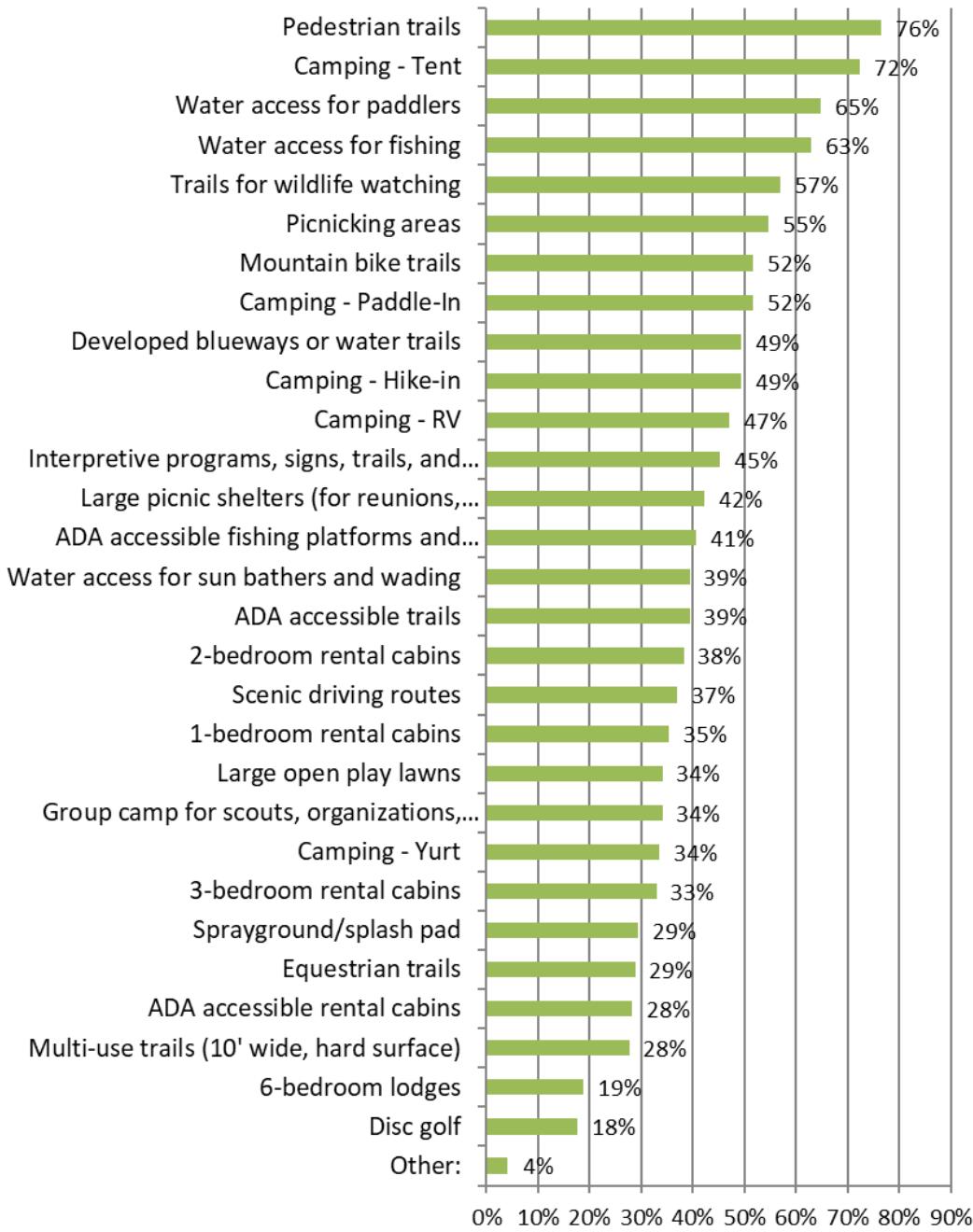
Working with the Virginia Master Naturalists (High Knob Chapter) and Virginia Master Gardeners for public education opportunities

Boats---canoes, paddle, row boats, etc.

Small visitor centers in all towns along the river

Q.8 What specific facilities or services should be provided within Clinch River State Park? (Select all that apply)

What specific facilities or services should be provided within Clinch River State Park? (Select all that apply)



Other:

group fire pits

Keep as primitive as possible

Snow Skiing

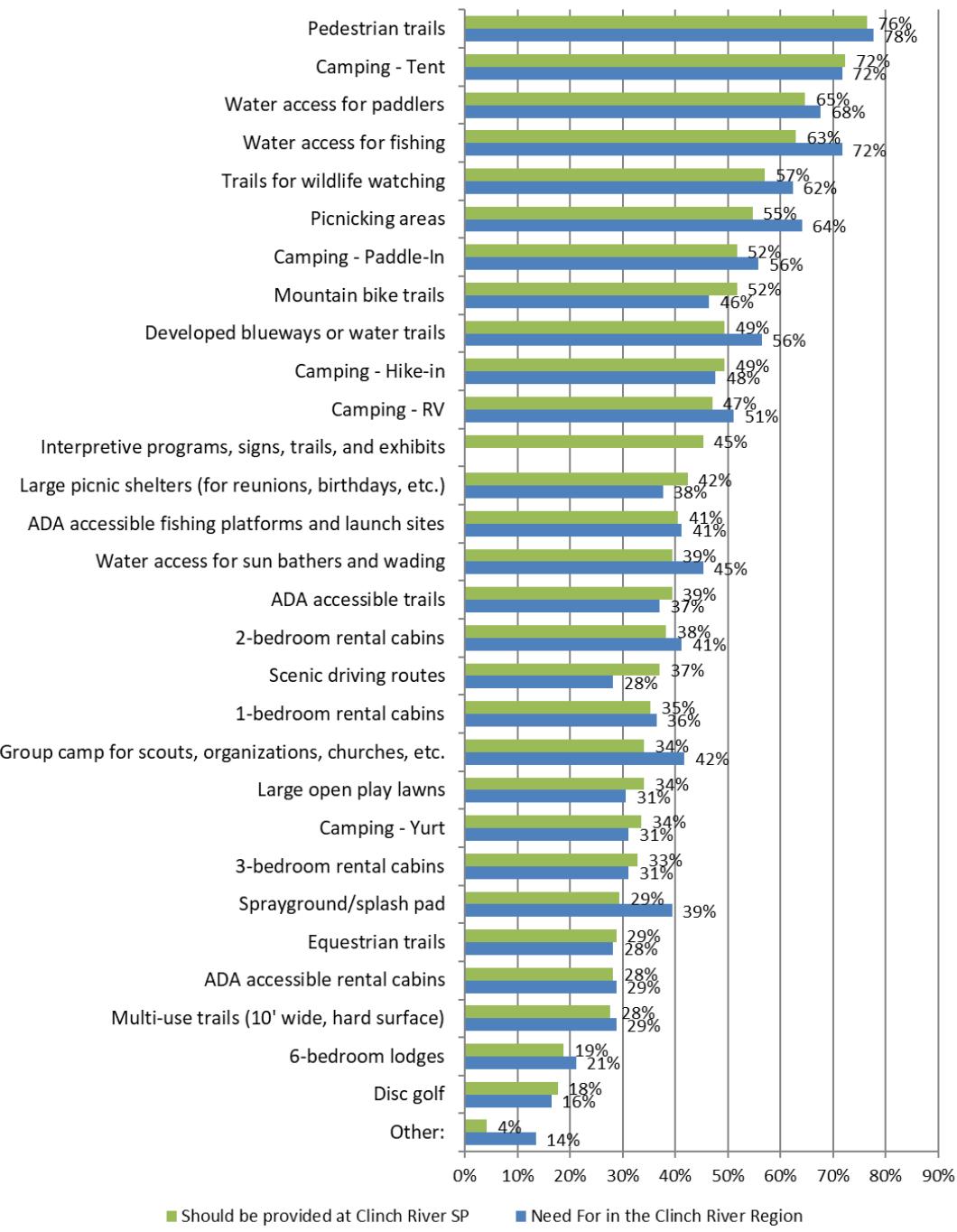
Dog park please!! Would so beneficial

Equestrian camping and trails

I emphasize non-commercial no cabins no venues for large gatherings keep it natural

The following chart compares the response of Q.6 Regional Recreation Needs with the response from Q.8 Specific Recreation Amenities Desired at Clinch River State Park. Comparing the results shows the priority of regional needs compared to the public's desired amenities at the Clinch River State Park site. The ranking of needs in the two responses track closely together, demonstrating that many of region's recreational needs can be achieved at Clinch River State Park. The recreational amenities that had 8 percentage points or greater difference between desired facilities in the region compared to the site were all, with the exception of scenic driving routes, more desired in the region than at the park site: water access for fishing (63%/72%), picnicking areas (55%/64%), scenic driving routs (37%/28%), group campgrounds (34%,42%), and sprayground or splashpad (29%/39%).

Desired facilities in Clinch River SP compared with the recreational needs of the region



Q.9 What activities or facilities should NOT be included in the Clinch River State Park?

The word cloud below shows the frequency of words and phrases recommended to be excluded from the activities at Clinch River State Park. The larger the word, the more frequently it was written by respondents. "None" and N/A responses were filtered out of the final response list and word cloud.



Responses

ATV, motocross bikes, mules (farm vehicles motorized) , fireworks, gender reveal parties, bicycles on walking trails, pets not on leashes

Beer drugs places to party

Hunting

Anything that encourages too many people there at the same time. It will bring trash and destruction of the natural state of the park. Preserve nature. People can go to cities to see events and gather.

Places for weddings or reunions

Foot traffic in the river channel and activities that require it (like fly fishing/atv)

Atvs or things with engines. they disturb nature

No atvs or side by sides

Multiday festivals

Disc Golf

Consumption alcohol, trash

Alcohol

Horses

Any activity that would be detrimental to natural beauty and diversity

Dog park

Large green spaces (grass areas) near river, riparian buffer should be preserved as much as possible

No restaurants

Nothing that makes the park too developed.

Anything that impacts the river's composition

rv

Rallies or protests

No trespassing areas

RV camping

Concerts, alcohol, motor vehicles. No paved surfaces, board walks are ok. Keep firewood at picnic and campsites.

Any way that people can learn about and enjoy our region is acceptable

Smoking

Not sure

Hunting

Keep it simple, nothing major, it's a wild park. Don't go to extreme with things.

Horse trails

ATV and motorbike trails

Open to discussion. Not sure.

Motorized activities

Alcohol

anything religious.

ATV usage

Huge public entertainment venues.

Skate boarding

Anything that would have a large impact on changing the area like other buildings or large RV parks. Things that would endanger natural beauty of the area.

Large festival events facilities

Anything that could bring pollution and trash without proper disposal units.

Golf & unaffordable prices

Mountain Bike Trails. The City of Norton has already capitalized on this with their Flag Rock Recreation Area.

RV camping, car access, event venue

Mountain bike trials, horse trails,

Playgrounds

Anything that significantly harms the ecosystems

Hunting

Do not make motorbike and four wheeler trails - no one in nature want to listen to that noise

Dogs

Fireworks should not be allowed.

Activities that stereotype Appalachian people or culture in a demeaning manner.

Playground

Atv trails

Nude sunbathing

Let's not turn it into another ATV trail. A place to enjoy nature without the noise and fumes from gas powered vehicles would be great.

4 wheeler

Large Swimming Pools

water access for sun bathing and wading (Such areas often ends up being crowded and trashed.))

golf

ATVs, trail bikes

Atv

Anything that exploits the region

Horse trails

ATV trails, dredging/blasting, any sort of construction that reduces populations of critically imperiled species

AV trails

4 wheelers

Equestrian Trails, Camping-RV

Playgrounds...nature is a playground. Cabins and park infrastructures are okay but too many or too manicured of a park can defeat the purpose of connecting to nature.

Pools, splashpads, etc.. I believe the focus should be on opportunities to connect with the unique nature and wildlife the park has to offer.

Atv

No atv

ATV trails

Long term camping- 1 month max in 1 location

Bars

Not fishing

Splash pad

Fishing

Keep the focus on the river and watersports

ATM and motorcycle

Cabins

Equestrian

Pool, splash pad

ATV Trails

Skateboarding

Open hunting

No ziplines

Political rallies of any kind

Use of firearms. Off road use of motor vehicles.

Atv

Cabins and picnic shelters

ATV use, motorized water craft

I really can't think of any that shouldn't. We should set our goal high to create the best state park that we can!

Hunting

RV camping

Alcohol related or supported events

No motorized vehicles, no horses

Hunting

Splash pad or pool

Keep it natural, protect the environment and biodiversity.

Atv

RV camping - detracts from the area immensely.

Please keep motorized vehicles to a minimum!

ATVs and other motorized vehicles

Motorized vehicles on trail

ATVs

Spray ground/water park. Anything that disrupts the ecologic nature of the clinch river - a mentioned water park in the river would fall in this category.

I think they should have more things

Equestrian trails

Hunting

Private events, I feel like it would prohibit access to areas for other visitors and could possibly cause more trash around the park.

ATV, RV, large facilities, lots of roads

ATV Trails near pedestrian areas

ATVs

We want it all!

Atv/utv trails

super touristy activities like gem mining; focus on the nature and culture!

No motorized traffic, prohibition of mushroom hunting (picking of fruiting bodies does not affect the mycelium)

intense development -rv sites, swimming pools

Anything with an RV

Unclude everything possible

I don't want to see it overly developed. The attraction is it's wildness.

Commercial venues

No four wheelers

ATV TRAILS

Any off pavement gas or electric vehicles/bikes, etc

Horses

Clinch River State Park should focus on the natural resources associated with the River and on the settlement of the area. It should not become a full service state park with cabins and lodges and too much development.

Splashpad

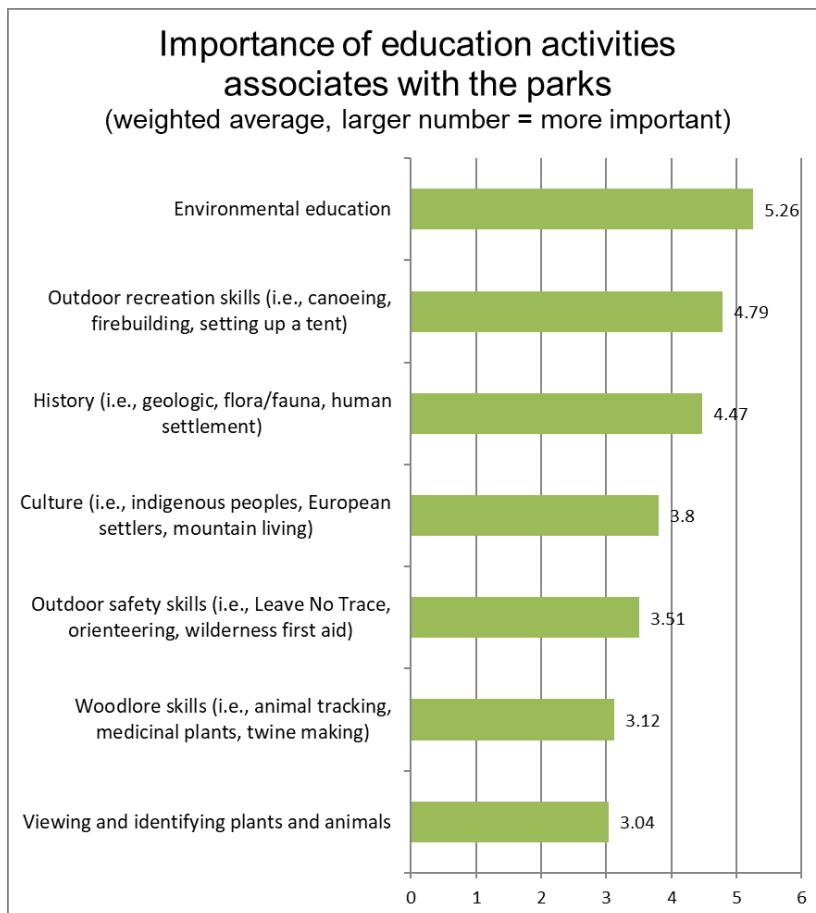
any motorized recreation (ATV, dirt bikes, etc.)

Motorized trails

Scenic driving tours

I don't think anything should be off the table, unless it will compete with something in a community nearby (example: an amphitheater when the town at the bottom of the hill has an outdoor performance venue they use, or a launch site when a community nearby already has one)

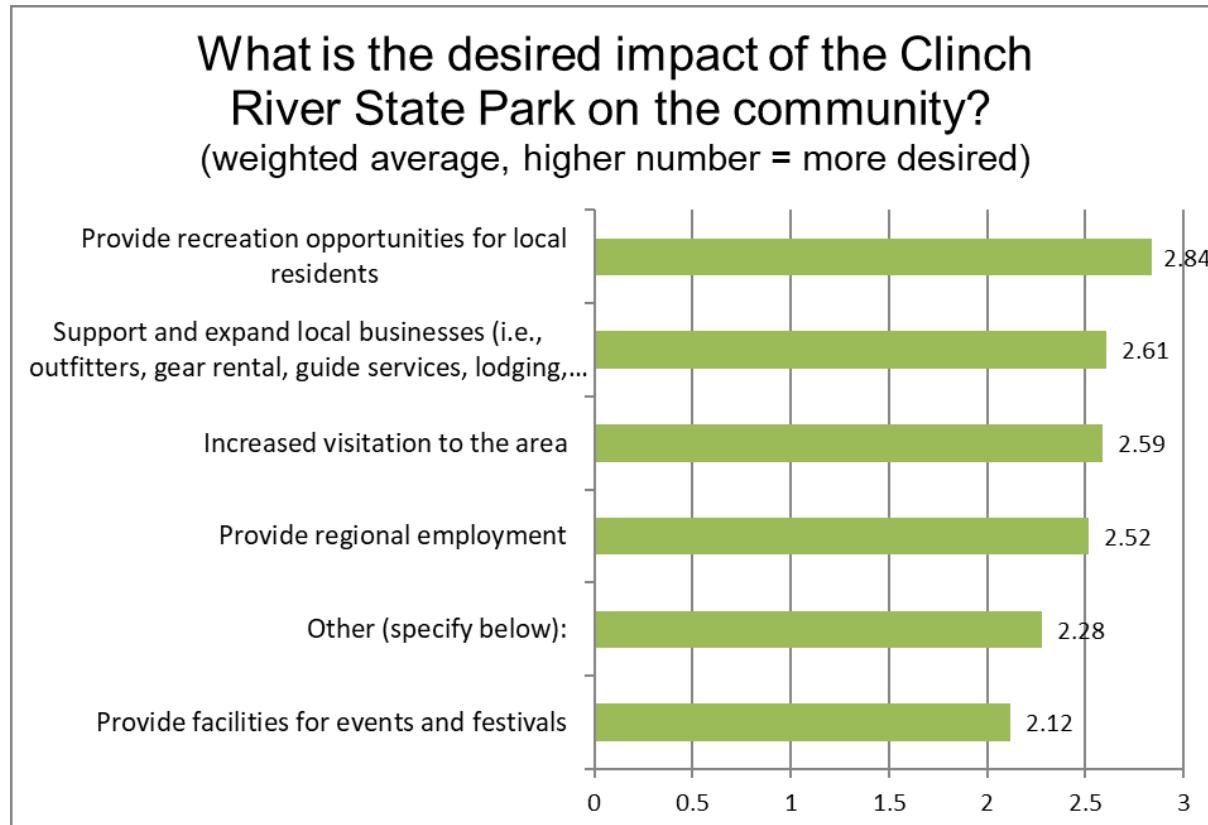
Q.10 Order the importance of the following education activities associates with the parks.



	1	2	3	4	5	6	7	TOTAL	SCORE
Environmental education	36.47% 62	18.82% 32	15.88% 27	10.59% 18	5.29% 9	7.65% 13	5.29% 9	170	5.26
History (i.e., geologic, flora/fauna, human settlement)	12.94% 22	25.29% 43	17.06% 29	14.71% 25	10.00% 17	10.59% 18	9.41% 16	170	4.47
Culture (i.e., indigenous peoples, European settlers, mountain living)	4.71% 8	14.12% 24	18.82% 32	20.00% 34	15.88% 27	14.12% 24	12.35% 21	170	3.80
Outdoor recreation skills (i.e., canoeing, firebuilding, setting up a tent)	27.65% 47	14.71% 25	15.88% 27	16.47% 28	8.82% 15	8.82% 15	7.65% 13	170	4.79
Woodlore skills (i.e., animal tracking, medicinal plants, twine making)	2.35% 4	9.41% 16	7.65% 13	14.71% 25	29.41% 50	17.65% 30	18.82% 32	170	3.12
Outdoor safety skills (i.e., Leave No Trace, orienteering, wilderness first aid)	9.41% 16	9.41% 16	14.12% 24	10.59% 18	17.65% 30	24.12% 41	14.71% 25	170	3.51
Viewing and identifying plants and animals	6.47% 11	8.24% 14	10.59% 18	12.94% 22	12.94% 22	17.06% 29	31.76% 54	170	3.04

Q. 11 What is the desired impact of the Clinch River State Park on the community? (rate each item low/medium/high)

The chart below shows the weighted total of each categorized desired impact of the Clinch River State Park on the community.



	LOW	MEDIUM	HIGH	TOTAL	WEIGHTED AVERAGE
Support and expand local businesses (i.e., outfitters, gear rental, guide services, lodging, restaurants)	5.29% 9	28.24% 48	66.47% 113	170	2.61
Increased visitation to the area	5.29% 9	30.59% 52	64.12% 109	170	2.59
Provide regional employment	7.65% 13	32.35% 55	60.00% 102	170	2.52
Provide recreation opportunities for local residents	2.35% 4	11.18% 19	86.47% 147	170	2.84
Provide facilities for events and festivals	24.71% 42	38.24% 65	37.06% 63	170	2.12
Other (specify below):	27.59% 8	17.24% 5	55.17% 16	29	2.28

Other:

To have opportunities for kids to learn about nature, like jr ranger program, nature programs on weekends. Free of charge

Education and preservation

Do not over stress nature

Educate others on the benefits of this natural wonder

Availability

Make mostly primitive facility to protect the Earth

Maintain the culture

Promote our region

Instilling sense of pride and stewardship for natural wealth of landscape

Educate

Large Lodge for Conventions to be held in a Nature Area.

Access to natural settings for mental health and conservation education.

increased protection of rare plants & animals

Provide structured ways to conserve AND enjoy our beautiful outdoors here

Protect biodiverse sensitive lands/waters. Restore local pride in a shared land. Educate and enforce land/wildlife protection practices.

Fishing

Non commercial! No cabin s or lodges

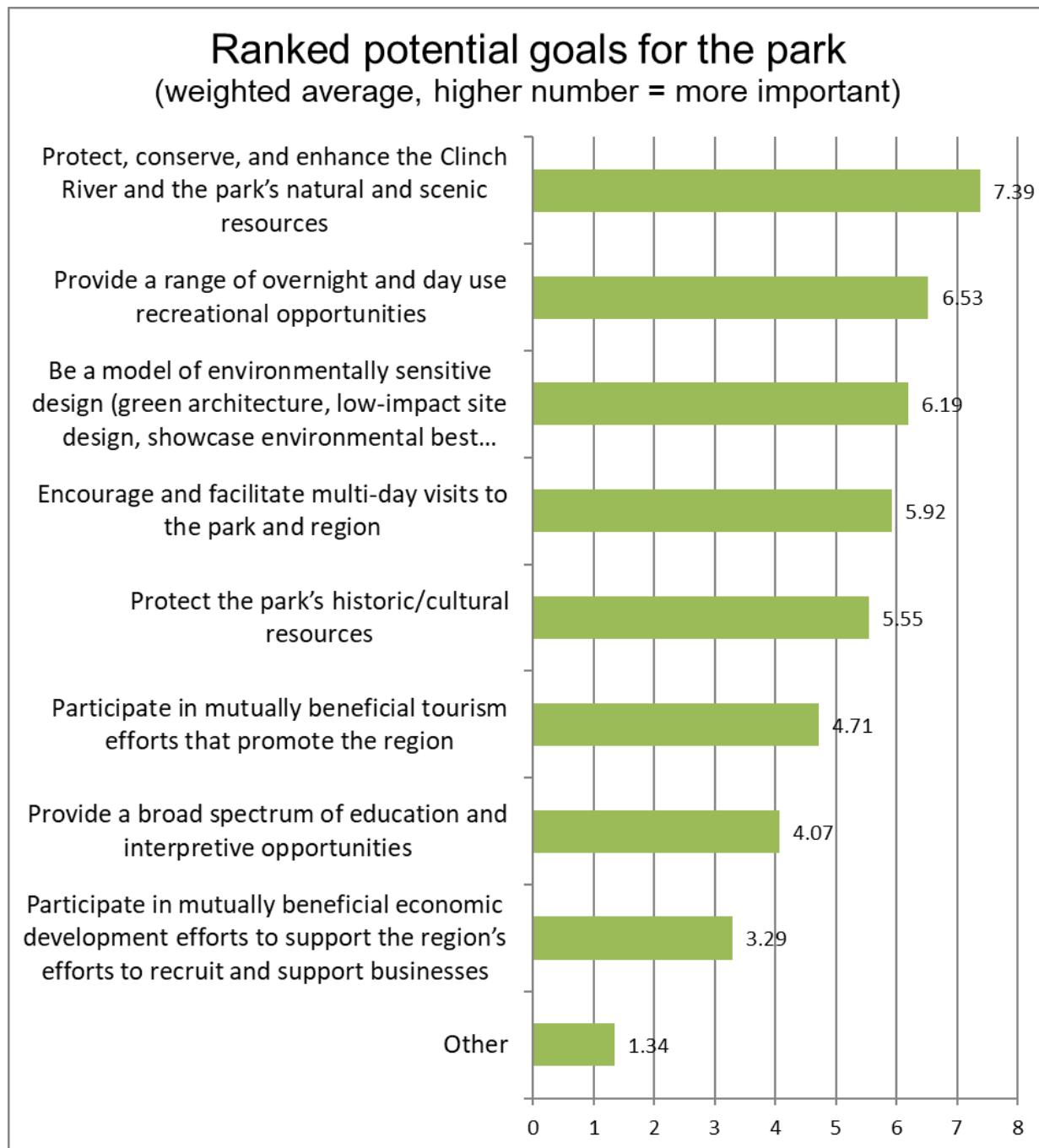
Photo opportunities

RV camping in Wise County

Mountain biking

Q.12 Rank these potential goals for the park, with 1 being the most important.

The chart below shows the weighted total of each activity's importance ranking.



CLINCH RIVER STATE PARK COMPREHENSIVE PLAN

Virginia Department of Conservation and Recreation

	1	2	3	4	5	6	7	8	9	TOTAL	SCORE
Provide a range of overnight and day use recreational opportunities	28.24% 48	15.88% 27	11.18% 19	12.35% 21	11.76% 20	7.06% 12	6.47% 11	5.88% 10	1.18% 2	170	6.53
Encourage and facilitate multi-day visits to the park and region	7.65% 13	19.41% 33	18.82% 32	14.71% 25	11.76% 20	11.76% 20	10.59% 18	4.71% 8	0.59% 1	170	5.92
Be a model of environmentally sensitive design (green architecture, low-impact site design, showcase environmental best practices)	14.12% 24	18.24% 31	20.00% 34	16.47% 28	7.06% 12	8.82% 15	7.65% 13	6.47% 11	1.18% 2	170	6.19
Protect, conserve, and enhance the Clinch River and the park's natural and scenic resources	37.65% 64	20.59% 35	14.71% 25	12.94% 22	6.47% 11	2.94% 5	2.35% 4	1.76% 3	0.59% 1	170	7.39
Protect the park's historic/cultural resources	1.76% 3	11.76% 20	17.06% 29	17.65% 30	27.06% 46	15.88% 27	4.12% 7	4.12% 7	0.59% 1	170	5.55
Participate in mutually beneficial tourism efforts that promote the region	4.71% 8	5.29% 9	6.47% 11	11.76% 20	15.88% 27	32.35% 55	14.71% 25	8.24% 14	0.59% 1	170	4.71
Provide a broad spectrum of education and interpretive opportunities	2.35% 4	4.71% 8	5.29% 9	8.82% 15	11.76% 20	12.94% 22	40.00% 68	13.53% 23	0.59% 1	170	4.07
Participate in mutually beneficial economic development efforts to support the region's efforts to recruit and support businesses	1.76% 3	3.53% 6	5.88% 10	4.71% 8	8.24% 14	8.24% 14	11.76% 20	50.59% 86	5.29% 9	170	3.29
Other	1.76% 3	0.59% 1	0.59% 1	0.59% 1	0.00% 0	0.00% 0	2.35% 4	4.71% 8	89.41% 152	170	1.34

Q.13 If you specified "other" in question #12 above, please list your answer:

80 individuals responded to Q.13, only 31 responses contained relevant content, rather than blank or n/a. Those 31 responses are listed below.

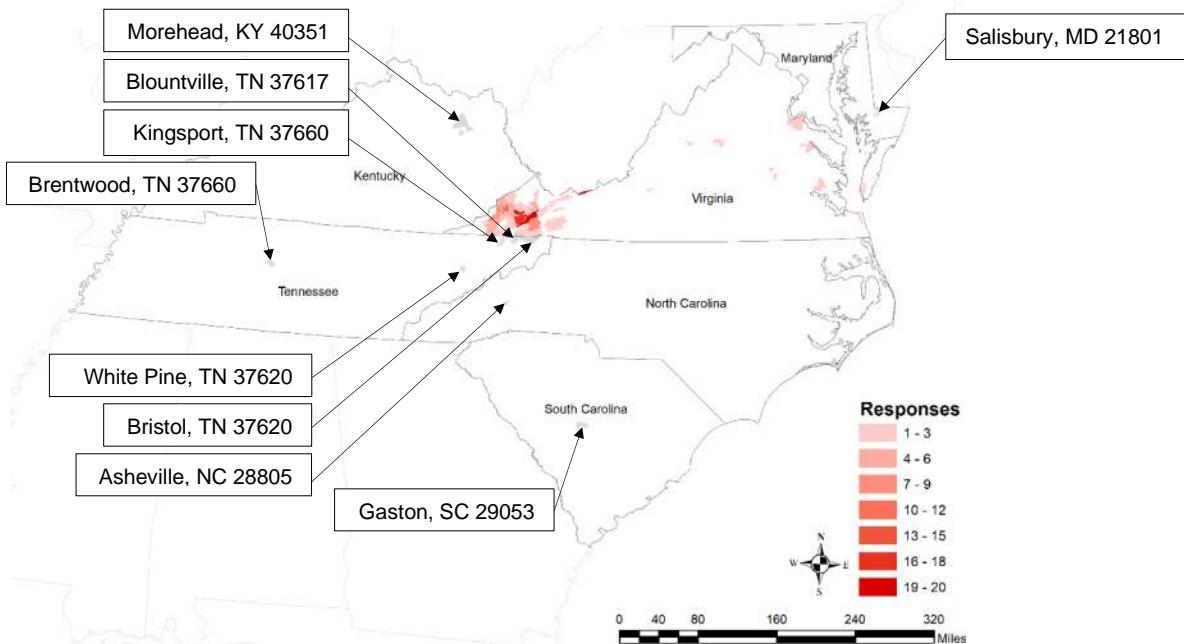
Respondent's Responses

- Family fun activities
preserve the quiet as much as possible
Cleveland area near clinch River needs a biking trail
Money cannot be the driver
To create a place in southwest Virginia to enjoy
Good Place for boating
Provide a large totally primitive space
Somewhere safe for the teens to hang out
Reach more people out of state to visit
Make use if our natural resources
Walking, hiking, biking for seniors alone river
Stories around the fire
Continuing education and development workshops for further enhancement and growth of economic development in the area using the plentiful natural resources of farmland and water. Such as organic farming, fish hatchery and farming, mushroom farming, etc.
Did not specify other
Fishing
Conservation and education of flora and fauna.
Clean up the damage from vandalism and graffiti
Maintain an emphasis on indigenous history surrounding the land
Limit access to certain types of vehicles
Be inclusive of all activities
accessibility for walking for senior citizens
Fishing
Noon
Walking trails
Keep this low impact noncommercial, this park will bring people who want a tranquil natural experience
If you protect the park's environment, you are fulfilling most of the goals listed in the question in the first place
Employment opportunities, particularly for local young people / UVA-Wise grads
Ecotourism; photography and painting workshops
To promote pride in the region.
Build mountain bike trails
This survey is becoming too long and cumbersome

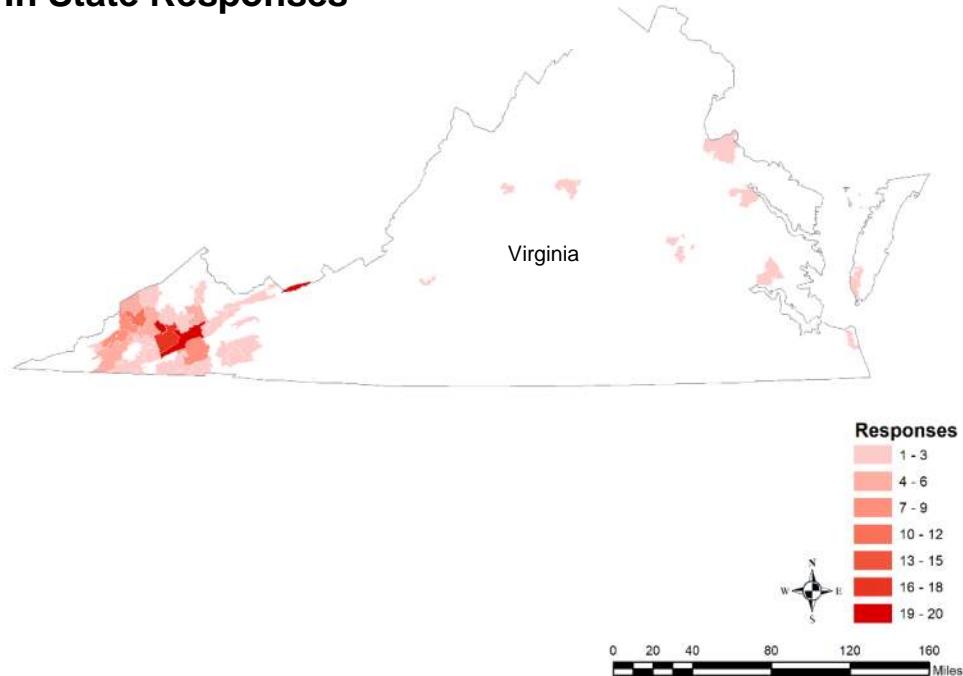
Q.14 What is your home zip code?

The diagram below shows the number of responses that took the survey from out of state and within the state using zip codes.

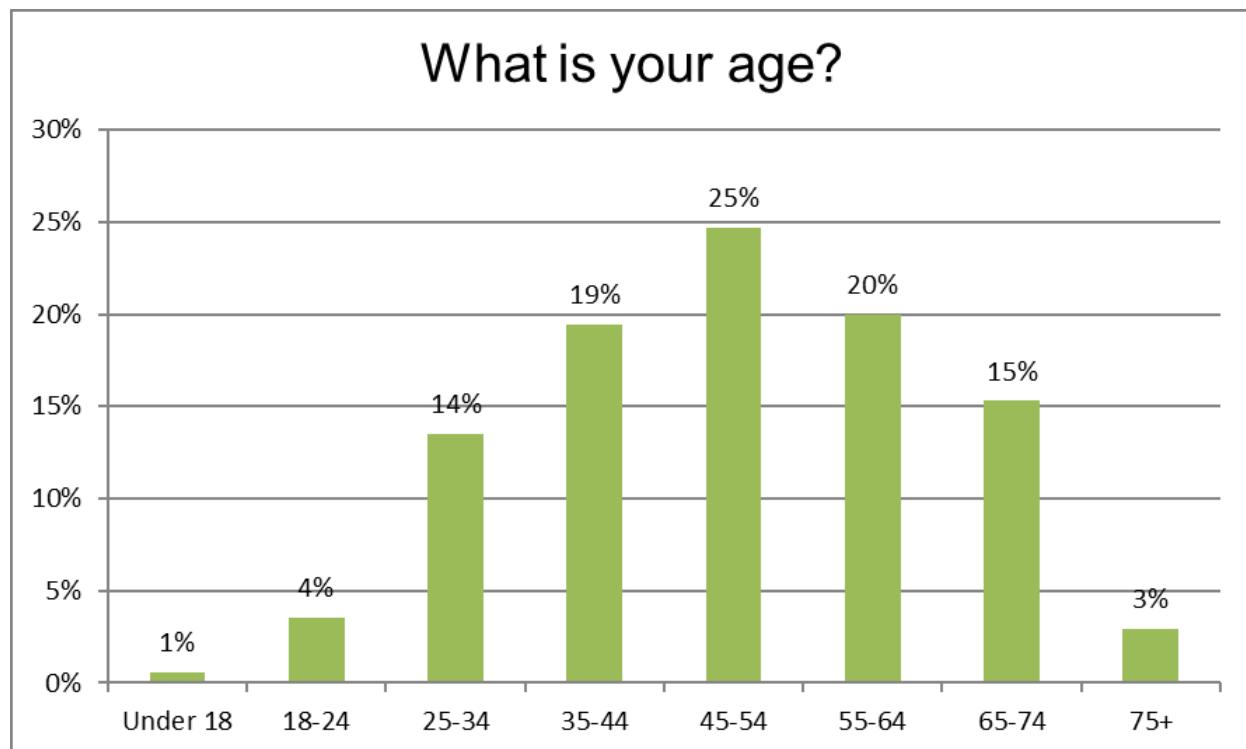
Out of State Responses



In State Responses



Q.15 What is your Age?

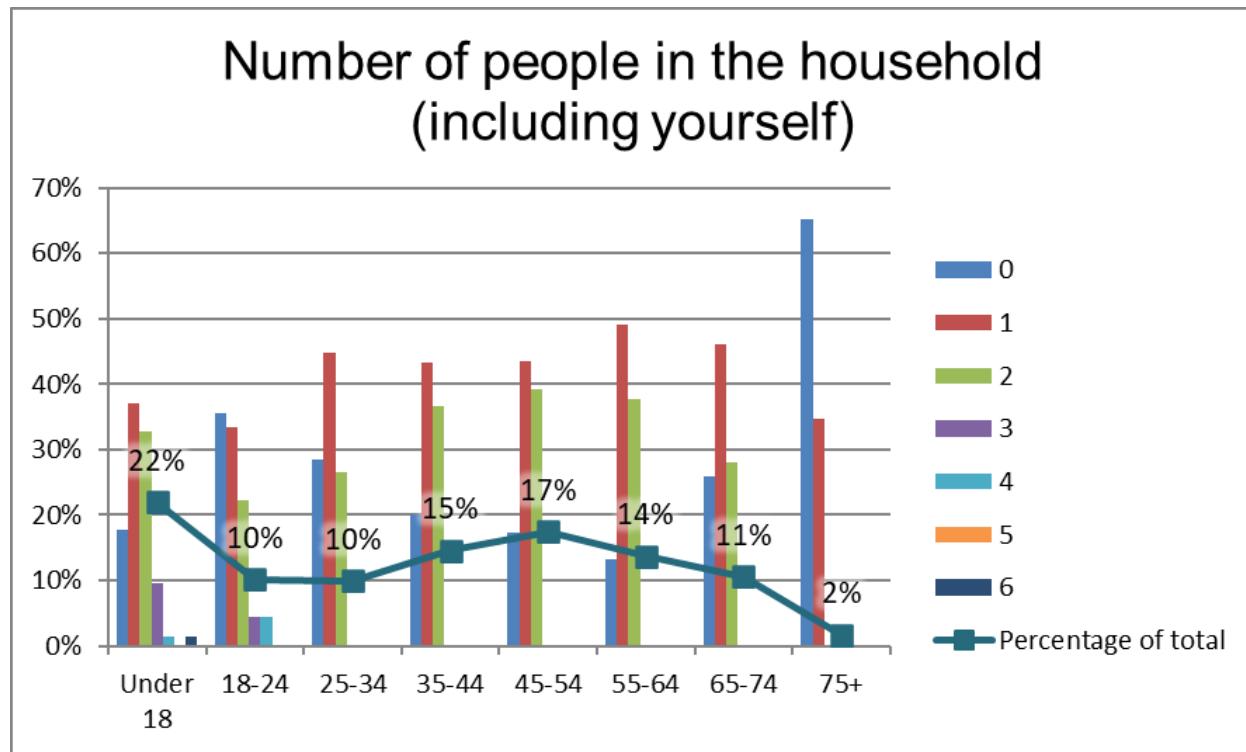


ANSWER CHOICES	RESPONSES
Under 18	0.59%
18-24	3.53%
25-34	13.53%
35-44	19.41%
45-54	24.71%
55-64	20.00%
65-74	15.29%
75+	2.94%
TOTAL	170

Answered: 170

Skipped: 0

Q.16 Number of people in the household (including yourself).

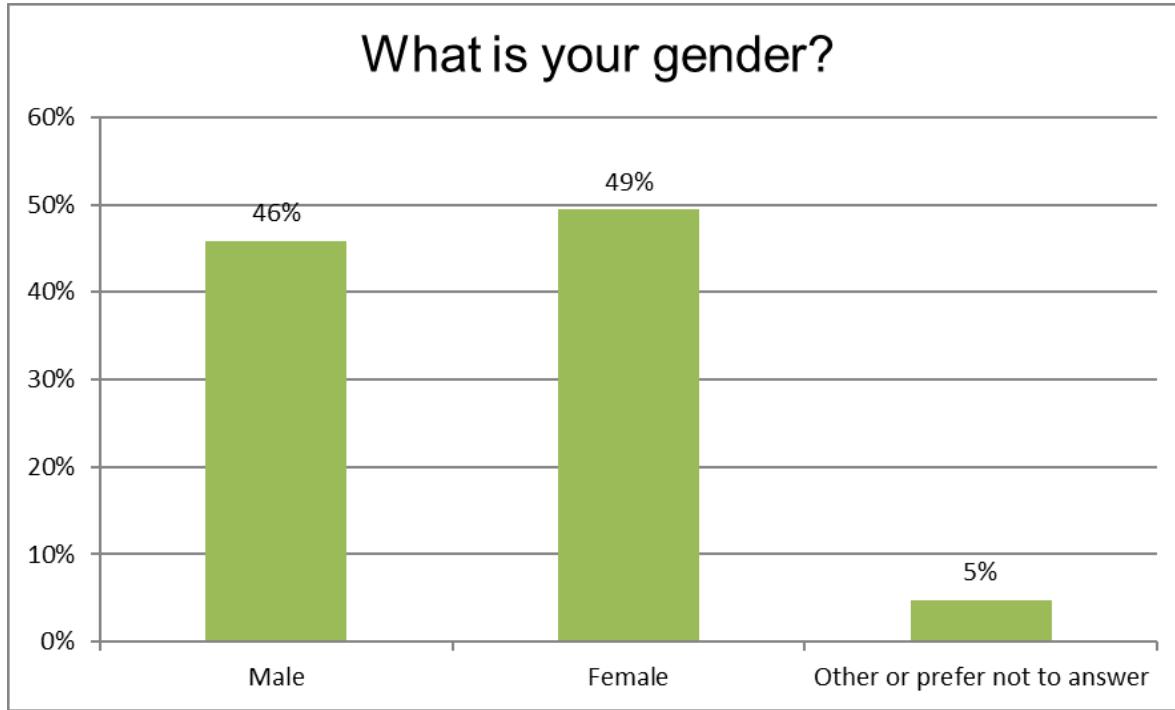


Number of people in the household (including yourself)											
	0	1	2	3	4	5	6	7	8	9	TOTAL
Under 18	17.81% 13	36.99% 27	32.88% 24	9.59% 7	1.37% 1	0.00% 0	1.37% 1	0.00% 0	0.00% 0	0.00% 0	73
18-24	35.56% 16	33.33% 15	22.22% 10	4.44% 2	4.44% 2	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	45
25-34	28.57% 14	44.90% 22	26.53% 13	0.00% 0	49						
35-44	20.00% 12	43.33% 26	36.67% 22	0.00% 0	60						
45-54	17.39% 12	43.48% 30	39.13% 27	0.00% 0	69						
55-64	13.21% 7	49.06% 26	37.74% 20	0.00% 0	53						
65-74	26.00% 13	46.00% 23	28.00% 14	0.00% 0	50						
75+	65.22% 15	34.78% 8	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	23

Answered: 170

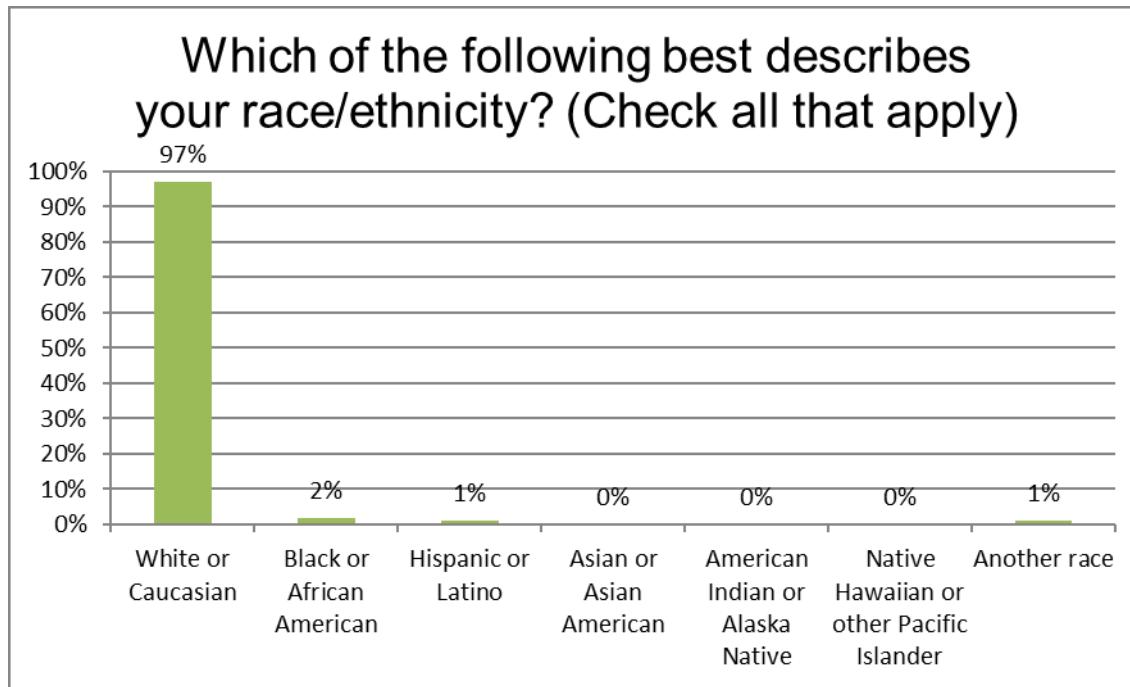
Skipped: 0

Q. 17 What is your gender?



ANSWER CHOICES	RESPONSES	
Male	45.88%	78
Female	49.41%	84
Other or prefer not to answer	4.71%	8
TOTAL		170

Q. 18 Which of the following best describes your race/ethnicity? (Check all that apply)



ANSWER CHOICES	RESPONSES	
White or Caucasian	97.06%	165
Black or African American	1.76%	3
Hispanic or Latino	1.18%	2
Asian or Asian American	0.00%	0
American Indian or Alaska Native	0.00%	0
Native Hawaiian or other Pacific Islander	0.00%	0
Another race	1.18%	2
Total Respondents: 170		

Q.19 Additional comments regarding the Clinch River State Park master plan:

According to the actual survey there were 81 out of 170 respondents who have provided comments.

Respondent's Comments	
1	Glad we have a park. Rangers are very nice.
2	Vehicle access, need some signage for the entrance and entire park!!! We appreciate the opportunities for employment but do not want our historical geological areas
3	corroded by a bunch of tourists who just make a mess This is one place on earth that economic interests should take a back seat to the unique scenery
4	and biological diversity We need safe ADA accessible biking trails. Please consider the impact that you can have on
5	connecting people with disabilities to nature.
6	Be stewards not masters
7	Love hunting there
8	Protect and maintain diversity and history
9	Awesome
10	To showcase the beauty of southwest Virginia.
11	Needs to be staffed and monitored daily 24/7 Please keep the health of the native animals in the river in mind when planning recreation
12	activities. These animals should come before the needs of us humans.
13	The RIVER should be the focus!!!! Not state funds
14	Please protect the space and keep the area primitive with dirt foot paths
15	None
16	None
17	Looking forward to it
18	Recreational activities
19	Excited about the state park for our area Having a splash pad would be great for the area. We've tried getting one installed at the park or at the pool. Several town council members are working towards that goal, however continuing issues
20	with the pool are preventing an addition.
21	Don't screen it up
22	Thank you for working to protect the Clinch River
23	Great opportunity for region. Plan to visit regularly
24	Scott County has some beautiful places. Would love to see a Lodge in Dungannon area where we could stay several days with beautiful view of Clinch River, the Valley and Mountains in the background. Good food in the lodge
25	restaurant for day trips and longer stays.
26	Sounds like an awesome opportunity for the Clinch River I have used this area for years and love it. I just don't want it to become over crowded or become a place I have to pay to use. I've fished that river since I was a child and want to preserve it for other generations.
27	My mother grew up in Dickenson County. The area needs some way to promote jobs. This would be a great opportunity.
28	GO STREAMSWEEPERS

- 30 I have lived in Wise County my entire life. I'm an avid outdoorsman and an active member of my local community. I would love to see Clinch River State Park develop into something that can draw people into this area.
- 31 I think this survey would be improved by having "non-binary" as an option on the "gender" question. "Other/prefer not to answer" does not allow the park to gather data on non-binary people, which limits researchers' and others' using the data's ability to understand accurately their results of the survey in relation to people's gender identity.
- 32 I'm so glad for our State that this has become a real effort in our Southwest VA area because there is so much natural beauty = thank you for doing this I cannot wait to visit this site in Russell Country - I would love to receive regular updates on the Park Progress at Dennis Hoover, 568 East Jackson Street, Gate City, VA 24251 812 320 2951
- 33 None
- 34 We would be so proud to have a top class state park down the road from our house. We invite our out of state relatives every summer to enjoy the clinch river. An entire state park would be Amazing!!
- 35 Educate the public in the importance of the region as the jumping off point of early American westward expansion. Example: Daniel Boone lived in nearby Castlewood for a lengthy period following a failed attempt to cross the Cumberland Gap resulting in the death of his son. This area is the beginning of the West for the central colonies.
- 36 None
- 37 Love this! Thanks! I am atop a beautiful ridge with a million dollar view. Developing the park as a source of income should come secondary to conserving this precious resource. Enhancing access without commercialization is the goal.
- For myself and many of my peers, we would flock to such a place and have often discussed lack of access for birding, picnics, camping or simply a place to sit under a tree by Clinch River and soak in the ambiance.
- 38 Thank you for this survey. One of the greatest joys of living here is being able to see some of Virginia's rarest flora in the wild - e.g. *Synandra hispidula* and *Actaea rubifolia*, which are critically imperiled in Virginia. The creation of this park is an opportunity to preserve these and other species (e.g. the Clinch's mussels), but the wrong kind of development could easily ruin the best part of this incredible place.
- 39 None
- 40 I would keep it as natural as possible but provide a few ways that many different types of people with different interests and abilities can enjoy the park. Too often VSP's are manicured and clouded with "stuff" (buildings, playgrounds, discgolf, waterpark) that people are enjoying a false sense of what nature really is. I understand VSP's are a business and are meant to be run like one but it is possible to run one without commercializing nature so much. Untouched, wild lands is what we need most as well as education.
- 41 I am really looking forward to having better access to the clinch river and areas surrounding it. I believe it will be an excellent opportunity for people of this region as well as others outside of it to come and enjoy outdoor recreation.
- 42 Na
- 43 Protect the ecosystem more exploit the economic system less.
- 44 Fishing
- 45 Looking forward to developed paddling and outdoor recreational opportunities!
- 46 None

- I have been walking here for years. I hope there will be some new trails added. Trails that are of similar surface to the main trail, with some bluestone and a level surface with gradual incline would be fantastic. I have foot problems and it is hard to find areas that I can walk where the grade is not too steep. I appreciate a longer trail and I'm happy to wind back and forth to get to a higher elevation versus just walking straight up. I am so excited about our new state park!
- 48 Excited to see what happens. Offer lots of volunteer opportunities too
- 50 Looking forward to seeing the master plan
- I think you will get a lot of people saying they want cabins, venues, picnic sheds, and make it commercial, this park should not be for wedding venues or for large groups to come in, but keep it a very minimal impact very little should change here. This area can be used without disturbing a lot of this park. People can use the river without hurting the river. I'm not against use but keeping the natural setting will appeal to people to enjoy, The typical state park model for Virginia should change with this park. Have some RV and tent sites, walk inside paddle insights these are wonderful ideas! But no larges no picnic sheds. I've lived on the river all of my life, and I am a tourism professional. Let the lodging be taken care of by the local communities so people can stay in other hotels, not the park, the park needs to benefit the communities, the park should not be the central focus
- 51
- 52 I'm very excited to see the Clinch River State Park develop.
- 53 X
- Please keep out the ATVs and the horses. There are plenty of places for those activities
- 54 ALREADY. They are destructive in every sense.
- 55 Thank you for asking our opinions
- 56 Let's enjoy the Clinch without doing any damage!
- 57 None
- 58 Excited to see what comes of this!
- We are very excited to have this park in our backyard. The opportunities for this park are endless. The blueway concept is unique and outside of the box thinking will be needed to make this park come to fruition and successful.
- 59
- 60 The staff is already doing a great job, keep up the great work
- 61 NA
- 62 Keep it wild!!!
- 63 Just work around what the beautiful Clinch River has provided us.
- 64 A recreation or splash pad area would be a great addition
- 65 .
- 66 We are so excited!
- 67 Na
- Cutting/plucking mushrooms have little to no affect on mushroom growth due to mushrooms being the fruiting body of the organism. Mushroom hunting should be permitted to allow for collection of anything but woody conks. Laetiporus sp, Pleurotus sp, Morchella sp, Griffola frondosa, Hypholoma lateritium, Auricularia sp, Exidia recisa complex, Tremella mesenterica, Craterellus sp, Cantharellus sp., and Hericium erinaceus are among some of the most common and edible mushrooms in our region.
- An area consisting of decaying logs would be really cool for demonstrating fungal diversity in the park where rangers could even inoculate logs with (some of) the above mentioned species.
- 68 Mycophobia is rampant in North America and should be addressed with the public by experts.

- 69 Please provide RV camping in Wise County
- 70 Dog park and a slide play area
Looking forward to seeing this park!! And Single private campsites for overnight canoe and kayak
- 71 trips would be great!
My father and his siblings were born in the English house that once stood on Sugar Hill and of course was a French settlement after the English family lived there. I would like to see information about the maple syrup industry there, and the mussel pearl gathering that went on along the Clinch. Hopefully there will be some archeology done in the park as well.
- 72 Clinch. Hopefully there will be some archeology done in the park as well.
- 73 Preservation of the natural beauty and environment first on my list.
It is time for far Southwest VA to be given the opportunity to showcase itself and have local fun activities.
- 74 Unknown
- 75 Please keep it simple and natural for the river and launch sites.
Mountain biking is exploding. Build more trails and they will come. And stop the restrictions of the ones already there
- 76 More mountain biking and skill building courses
I'd like to see more bike trails. Don't see how race and gender really matter. We are all created equal
- 77 Would love to see some new bike trails
- 78 Exciting - just please do not compete with community assets in the region already in place.

APPENDIX C

PUBLIC COMMENT RESPONSE TO MASTER PLAN, FEB. 2023 – MARCH 2023

Clinch River Master Plan Public Comments February 15 - March 17, 2023						DCR Response	
	Date	Who	Method	Subject/Category	Comment		
1	Comment:	15-Feb-23		Public Meeting	Accessibility	ADA access for fishing? Camping?	Thank you for taking the time to share with us. It is our intent to make several of the river access points for fishing and water access ADA accessible. Construction will meet ADA requirements, and exceed them where resources allow.
2	Comment:			Facebook	Accessibility	Will there be roads for disabled fisherman to access the entire park?	Thank you for taking the time to share with us. With development and build out, many of the amenities in the park (at Sugar Hill in particular) will be accessible by vehicle (e.g. Visitor's Center, camping, camp store, picnic shelters, cabins).
3	Comment:			Facebook	Accessibility	Allow people who can't get around good to ride a 4 wheeler or golf cart.	Thank you for taking the time to share with us. With development and build out, many of the amenities in the park (at Sugar Hill in particular) will be accessible by vehicle (e.g. Visitor's Center, camping, camp store, picnic shelters, cabins).
4	Comment:	3-Mar-23	Joe Robinson	Email	Accessibility	Handicap fishing access would be a much appreciated.	Thank you for taking the time to share with us. It is our intent to make several of the river access points for fishing and water access ADA accessible. Construction will meet ADA requirements, and exceed them where resources allow.
5	Comment:			Facebook	Accessibility	I love that you asked about disabled fisherman access, we lack that across Va. My dad loves to fish, unfortunately due to the almost non existent handicap accessible areas in Va. he doesn't get to go. anymore.	Thank you for taking the time to share with us. We appreciate your feedback and it is our intent to make several of the river access points for fishing and water access ADA accessible. Construction will meet ADA requirements, and exceed them where resources allow.
6	Comment:	15-Feb-23		Public Meeting	Activities	Will there be day trips from Tazewell to Richlands? Or from Tazewell to the first dam? Would need an exit point at the dam.	Thank you for taking the time to share with us. Public access to the river is either agency owned or developed with a partner. We will pursue expanding access where opportunities present themselves. As far as guiding programs, future park development will support expanded program development.
7	Comment:	15-Feb-23		Public Meeting	Activities	Could there be day use options such as fishing on upper stretches of the river, specifically the areas that aren't conducive to paddling?	Thank you for taking the time to share with us. There may be opportunities, and as the Master Plan is a living document, those that are not currently identified in the Master Plan could be included in a future update, as the string of pearls is further developed. These opportunities could extend on both ends of the park.
8	Comment:			Facebook	Activities	Is there any potential for equine use?	Thank you for taking the time to share with us. Equestrian use has not been indicated on these sites. Based on an earlier survey 170 respondents said it wasn't a priority. These two sites would also prove challenging for these activities as they do not have the acreage. Additionally, Artrip cannot allow horses. They might be able to be at other locations in the future.
9	Comment:			Facebook	Activities	Will there be swimming areas [and] picnic areas for family outdoor activities?	Thank you for taking the time to share with us. There will be picnicing available along with many outdoor activities like hiking and camping.
10	Comment:			Facebook	Activities	Will there be fishin[g] or camping overnight?	Thank you for taking the time to share with us. There will be primitive camping opportunities as well as full service camping for RVs that will provide power and water services.
11	Comment:	3-Mar-23	Chris Fleenor	Email	Activities	Would like to see more bike trails and public fishing access.	Thank you for taking the time to share with us. We appreciate your suggestion. Trails will be evaluated and constructed on the property based on terrain and property constraints. Not all areas will be conducive for biking. We will continue to explore opportunities for biking and fishing.
12	Comment:	3-Mar-23	Joe Robinson	Email	Activities	Open up the existing bike trails down the river and Marlene hill for Mtn biking.	Thank you for taking the time to share with us. We appreciate your suggestion. Trails will be evaluated and constructed on the property based on terrain and property constraints. Not all areas will be conducive for biking.
13	Comment:	3-Mar-23	Joe Robinson	Email	Activities	Build new trails dedicated to bikes.	Thank you for taking the time to share with us. We appreciate your suggestion. Trails will be evaluated and constructed on the property based on terrain and property constraints. Not all areas will be conducive for biking.
14	Comment:	3-Mar-23	Joe Robinson	Email	Amenities	Full hook up campground.	Thank you for taking the time to share with us. There will be primitive camping opportunities as well as full service camping for RVs, at the Sugar Hill unit, that will provide power and water services.
15	Comment:			Facebook	Amenities	Keep it as close to natural to nature as you can because the natural beauty is the point of it all; and plenty of restrooms, and roads big enough for campers to pass.	Thank you for taking the time to share this with us. We appreciate your feedback, and agree the natural beauty of the park is worth protecting.

16	Comment:	15-Feb-23		Public Meeting	Branding	Could there be unique branding on blueway park signs?	Thank you for taking the time to share with us, we appreciate your suggestion and will take it under consideration.
17	Comment:	15-Feb-23		Public Meeting	Economic Development	Will the park start renting kayaks and canoes, potentially competing with local businesses?	Thank you for taking the time to share with us. Virginia State Parks does rent, but generally when there is an unmet need. This area meets the need locally, so it would be far less likely here. If renting does occur, it will be through a mixture of both concessions and partnering with local businesses. The DCR will work with outfitters along the string of pearls that make up the park in a way that does not compete, and helps drive the local economy.
18	Comment:			Facebook	Economic Development	Will it help Scott County or just the other counties?	Thank you for taking the time to share with us. The Park is envisioned as a string of pearls up and down the Clinch River from its headwaters in Tazewell down to the state line, thereby providing economic benefit to the region as a whole.
19	Comment:			Facebook	Economic Development	Glad to see that are doing something to bring money's to the area look at Hatfield macoy trail it's helped macdowell county greatly Tazewell county area needs something besides a courthouse.	Thank you for taking the time to share with us. We appreciate your feedback and participation in the Master Planning process for CRSP.
20	Comment:	15-Feb-23		Public Meeting	Funding	Could partners pursue alternative sources of funding?	Thank you for taking the time to share with us. Alternative sources of funding may be an option. DCR as a state agency would need to receive an approval for donations. With all of the existing and potential partnerships with CRSP it could be possible.
21	Comment:	15-Feb-23		Public Meeting	Funding	Can the state apply for federal funding to assist with the project? A nonprofit?	Thank you for taking the time to share with us. To a certain extent, the state can apply for funding. Some of these opportunities may require matching funds, however it is definitely possible. We appreciate your suggestion.
22	Comment:	22-Feb-22	Brad Kreps	Email	Funding	Suggest looking at Appalachian Regional Commission programs like POWER as an opportunity to secure additional funding to advance the development timeline. TNC would be happy to explore that with DCR.	Thank you for taking the time to share with us. We appreciate the suggestion and look forward to continuing to work with the TNC and other partners on this an other DCR initiatives.
23	Comment:	15-Feb-23		Public Meeting	General Process	Can the process be sped up?	Thank you for taking the time to share with us. The process for implementing projects identified in the CRSP Master Plan requires that funding be obtained to initiate them. The sooner funding can be obtained, the sooner phases can be built out. While the goal is for a Master Plan to be built out over 30-years it does not have to be; however, these kinds of initiatives may need to come from the individual and user groups, who ask for/request it and continue to advocate for the park.
24	Comment:			Facebook	Location	Virginia Department of Conservation and Recreation would this be in St. Paul?	Thank you for taking the time to share with us. The Sugar Hill unit anchor property for the park is located in St. Paul; however, the park is envisioned as a string of pearls that stretch up and down the Clinch River.
25	Comment:	28-Feb-23	Linda and Bud Williams	Email	Map location: Proposed spot as Category 2, overnight facility, below the Powers Branch entry into the River	Is that on the north or south side of the River banks? (Assuming north bank due to road access.)	Thank you for taking the time to share with us. All river support access designations listed on the map are identified as general vicinity locations for a potential future level 1 or level 2 access location. Specific locations will be reviewed/determined as potential site locations are identified in the future.
26	Comment:	28-Feb-23	Linda and Bud Williams	Email	Map location: Proposed spot as Category 2, overnight facility, below the Powers Branch entry into the River	Is that right at the Swinging Bridge?	Thank you for taking the time to share with us. All river support access designations listed on the map are identified as general vicinity locations for a potential future level 1 or level 2 access location. Specific locations will be reviewed/determined as potential site locations are identified in the future.
27	Comment:	28-Feb-23	Linda and Bud Williams	Email	Map location: Proposed spot as Category 2, overnight facility, below the Powers Branch entry into the River	Is that the existing commercial campground site?	Thank you for taking the time to share with us. All river support access designations listed on the map are identified as general vicinity locations for a potential future level 1 or level 2 access location. Specific locations will be reviewed/determined as potential site locations are identified in the future.
28	Comment:	28-Feb-23	Linda and Bud Williams	Email	Map location: Proposed spot as Category 2, overnight facility, below the Powers Branch entry into the River	Could our property on the south bank be an alternate for that overnight site? (Property is just down river above island and curve. (Poor road access)	Thank you for taking the time to share with us. Specific locations will be reviewed/determined as potential site locations are identified in the future. If there is a potential feasible scess site, owners may reach out to DCR/State Parks with property information.

29	Comment:	28-Feb-23	Linda and Bud Williams	Email	Map location: Proposed spot as Category 2, overnight facility, below the Powers Branch entry into the River	Are there any programs in place with lease options or purchase options that include lifetime use of property by owner with development taking place when no longer a residence?	Thank you for taking the time to share with us. We are not aware of those opportunities at this time. DCR would like to create partnership opportunities wherever possible.
30	Comment:	16-Feb-23	Scott Broyles	Email	Mountain Biking	Haven ridden extensively at Sugar Hill prior to the formation of the state park I am excited about the prospects of increased mountain biking opportunities being planned there. I strongly believe a trail building approach that includes beginner, intermediate, and advanced technical trails would bring the most riders to the park. An extensive trail system providing as much variation as possible for the site should be pursued to generate the greatest interest in the local and regional mountain bike community. Moreover, CRSP combined with the ambitious trail construction underway at Flag Rock Area Trail in nearby Norton, VA would draw mountain bikers from all over the region. Going all in to make the most and best trails possible at the park would make this area an attractive destination for mountain bikers for day rides and extended overnight visits resulting in economic benefits for the local communities. With big, bold, ambitious ideas, planning and execution we can make this area a mountain bike destination!	Thank you for taking the time to share with us. We appreciate your feedback and the suggestions you have provided regarding mountain biking opportunities in and around CRSP.
31	Comment:	20-Feb-23	Danny Bell	Email	Mountain Biking	Would love to see more trials for bikers and work with several people who Mt. Bike a lot as well. I really believe it would be really good for the park and the town. Mt Biking is becoming very popular and it would be nice to have some good trails close to home.	Thank you for taking the time to share with us. We appreciate your feedback and the suggestions you have provided regarding mountain biking opportunities in and around CRSP.
32	Comment:	21-Feb-23	Shannon Willis	Email	Mountain Biking	Just wanted to reach out and express my interest in Mountain Biking trails for the St. Paul Sugar Hill area. I feel the Sugar Hill area would be a great opportunity for a trail system and would bring more people to our area.	Thank you for taking the time to share with us. We appreciate your feedback and the suggestions you have provided regarding mountain biking opportunities in and around CRSP.
33	Comment:	22-Feb-22	Tim Robinson	Email	Mountain Biking	I was happy to see that Mountain Bike Trails were included in the plan for the Sugar Hill Section of the park. Myself along with several others have been riding bikes at the current Sugar Hill trail system for years, although we probably don't ride at Sugar Hill as much as we used to, due to some of the trails being closed to bikes. I understand that there will be time restraints due to funding, but I also feel like starting the new trails system would be one of the "least costly" ways to start making improvements within the park system. The sport of Mountain Biking has taken off in this area, but this area is still behind when it comes to having good local trail networks. People in Russell County are either driving to Norton Va. or Bristol Va. in order to ride really good trail systems. Any new trails and improvements will be greatly appreciated.	Thank you for taking the time to share with us. We appreciate your feedback and the suggestions you have provided regarding mountain biking opportunities in and around CRSP.
34	Comment:	15-Feb-23		Public Meeting	Park Conditions	Will there be a way, possibly online, to update the public on river conditions?	Thank you for taking the time to share with us. Our webpage for the park can be found at: https://www.dcr.virginia.gov/state-parks/clinch-river . This webpage typically includes a banner and other "know before you go" information, and additional information may depend on the data source. We can't guarantee we will know everything, and as this is the first time we've done it, we will continue to work on resources to aid the public, and appreciate your suggestions.

35	Comment:	23-Feb-23	Dan Manweiler	Email	Park Conditions	I live on the North Fork of the Houston River. The North Fork is very similar in appearance and hydrology to the Clinch. Both rivers often have periods where river flow is not sufficient to support paddling or tubing (tubes, kayaks and canoes all draw about the same amount of water). The USGS stream monitoring data is accurate and real time information that can be informative as to whether water levels are too low to support unimpaired floating, but the data is given in either cubic feet per second, or gauge height at each station. Neither data set shows the result relative to optimal floating conditions and therefore is useless to the layperson. I have learned through experience how the values reflect good floating conditions, as have a few others, but it could be interpreted with software and made much simpler and easier to visual. Conversely, river flow information would also help visitors when there have been flooding events to mitigate unsafe conditions. Take some time to develop an online presence that guides folks about what they will likely experience based on hydraulic data you interpret. Use your additional information to promote the park and you will find that the website I'm describing earns accolades. I don't agree that DCR has experience with this type of need based on parks where tidal fluctuations are often an issue. Most put ins in such locations are built to handle the tidal changes. I think this is a unique issue to your new concept of a "blue way" and one that you should get your consultant to plan for. Don't leave it up to the private sector. Do it yourselves and get the credit for it. You're going to have a lovely park. I'm excited about it.	Thank you for taking the time to share with us. We appreciate your feedback and the suggestions you have provided regarding providing online resources for hydraulic data for visitors.
36	Comment:			Facebook	Permitting	Will [there] be a fee now to walk the trails unless you hold a fishing or hunting license?	Thank you for taking the time to share with us. Virginia State Parks traditionally charges fees for parking and overnight accomodations. Fishing and Hunting licenses are issued through DWR not state parks.
37	Comment:			Facebook	Permitting	I'd like to see a Geocaching policy there on the property like other State Parks in the area that require a permit.	Thank you for taking the time to share with us. Many State Parks have their own geocache programs run through the year; for more information, see: https://www.dcr.virginia.gov/state-parks/geocaching2
38	Comment:	15-Feb-23		Public Meeting	Project Phasing	Will there be opportunity to expand upon phase one? (concerning property acquisition and recreational opportunities?).	Thank you for taking the time to share with us. There may be opportunities to expand upon phase one, as phasing is not exact and acts as a framework. DCR plans to do as much as much as it can do with any future funding that is allocated by the General Assembly. Typically, the first phase focuses on infrastructure, e.g. utilities and roads; however, other projects may be prioritized based on legislative or other requests. Additional property acquisitions and recreational opportunities may also be considered during this and other phases.
39	Comment:	15-Feb-23		Public Meeting	Resources	Was there consideration for mussels?	Thank you for taking the time to share with us. We appreciate your concern for the resources in and along the CRSP string of pearls. The DCR Division on Natural Heritage (DNH) is aware of the mussels presence and they were considered as part of this plans development. The Master Plan provides an overview of this resource. We will also be required to do a survey for rare, threatened, and endangered species within 6-months of development, so their presence will also be reevaluated and avoidance or mitigation measures considered closer to the time sites are developed.
40	Comment:	15-Feb-23		Public Meeting	Resources	Will bluebell island be damaged/developed on?	Thank you for taking the time to share with us. Bluebell Island is upriver from the current CRSP string of pearls, and will not be impacted. There may be a potential connection in the future, however this will evaluated in consultation with the public and other partners to determine how it could be incorporated and what if any development might occur.
41	Comment:	15-Feb-23		Public Meeting	Trails	Will there be equine trails?	Thank you for taking the time to share with us. Equestrian use has not been indicated on these sites. Based on an earlier survey 170 respondents said it wasn't a priority. These two sites would also challenging for these activities as they do not have the acreage. Additionally, Artrip cannot allow horses. They might be able to be at other locations in the future.

APPENDIX D

CLINCH RIVER STATE PARK MARKET ANALYSIS AND BUSINESS PLAN



Clinch River State Park

Market Analysis and Business Plan



November 2022

Prepared By:
pros consulting
INC.



“RIVERS ARE PLACES THAT RENEW OUR SPIRIT, CONNECT US WITH OUR PAST, AND LINK US DIRECTLY WITH THE FLOW AND RHYTHM OF THE NATURAL WORLD.”

- Ted Turner

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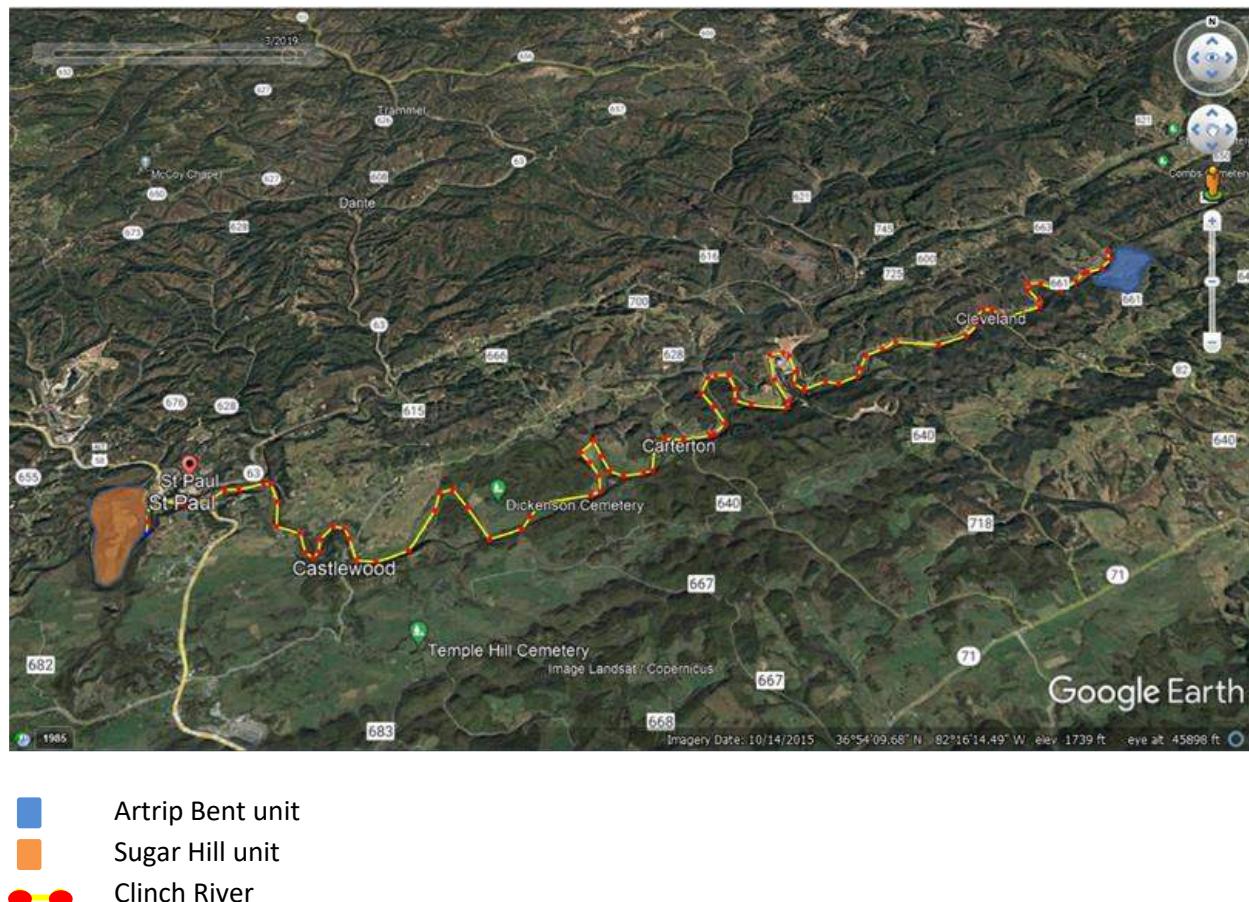
EXECUTIVE SUMMARY

The Virginia Department of Conservation and Recreation (DCR) envisions a new state park in far western Virginia that will be unique in the system, as well as a tremendous asset to the local communities. Clinch River State Park is to be designed and operated as a “string of pearls” along the Clinch River which is already very popular for recreational paddlers. This park and its multiple units will be enabling infrastructure that further promotes and supports paddling and recreational access to the highly scenic Clinch River in an area of the state that currently does not have a state park.

INTRODUCTION

This *Market Analysis and Business Plan* was completed in September 2022 as a part of the comprehensive master plan process of two units in particular – the Artrip Bent unit located in Russell County and the Sugar Hill unit located in Wise County. These two units are the anchors of a stretch of the Clinch River that is approximately 20 river miles in length and feature multiple access points between them. There is currently a local initiative, the Clinch River Valley Initiative (CRVI), that has organized and works to promote the recreational benefits, ecological biodiversity, and economic potential of the Clinch River as a significant natural resource in the region. CRVI currently designs and installs signage at key river access points and provides printed and digital information for users and visitors.

A Google Earth image of these two units and the Clinch River are detailed in the map below.



OBJECTIVES OF THE MARKET ANALYSIS AND BUSINESS PLAN

This *Market Analysis and Business Plan* was developed under the following objectives:

-  Evaluate the market characteristics and opportunities of the layered service markets for Clinch River State Park and its multiple units.
-  Integrate and enhance existing recreational and usage opportunities of the Clinch River into the operational strategy of the state park.
-  Utilize best practices and proven strategies for achieving a standard of excellence and financial resiliency in the operational strategy for Clinch River State Park.
-  Improve the visibility and desirability of Clinch River State Park as a unique resource for the local residents and visitors to the region.
-  To provide reliable access to the Clinch River for varied recreational uses that are respectful to the natural resources of the area and the overall health of the waterway.
-  Support the community investment with seamless and respectful operations and enhance partnerships and funding opportunities in both the public and private sectors.

ELEMENTS OF THE PLAN

The major components and key recommendations of this *Market Analysis and Business Plan* are the result of industry best-practice analyses at the local, regional and national levels. The components include:

- Service market delineation and analysis
- Regional and national trends analysis
- Usage and visitation projections
- Design recommendations
- Operations and management strategies
- Financial performance projections

OPPORTUNITIES AND CONSTRAINTS

There are opportunities and constraints that have been identified and addressed in the planning process of developing this *Market Analysis and Business Plan*. These are based on a thorough review of the site and engagement with local state park staff. They are detailed below and included in developing the operational strategy and pro forma that follows in this plan.

There are several opportunities that benefit the potential operational success of Clinch River State Park that have been identified. Those include, but are not limited to the following:

- The linkage of multiple sites along the Clinch River which is already a popular paddling destination.
- The limited availability of cabins and improved “park” accommodations in the near vicinity and region.
- Existing tourism and visitation to St. Paul and the area.
- The incredible beauty and terrain of both the Artrip Bent and Sugar Hill units.

In addition to the opportunities afforded by the sites, there are three primary constraints that must be addressed in the business plan portion of this study. These include, but are not limited to:

- While there is existing tourism to the area, the usage projections of the state park are nearly double the amount of current annual visitation to the region.
- Terrain and topography constrain potential development opportunities.
- There is not a direct river access options from the Artrip Bent site due to topography and an existing railroad track.

KEY RECOMMENDATIONS

INCLUSIVE USAGE AND BROAD APPEAL

It is critical that the design of both the Artrip Bent and Sugar Hill units enable and support usage from visitors with broad interests, varied skills and backgrounds, and diverse socioeconomic characteristics. Similarly, possible visitor experiences that range from free or low cost to more expensive will ensure that the park will be viewed as an asset for all types of users, including local residents and those that are visiting the region from further afield. There are certain activities and user experiences that may not be appropriate for these sites given their topography, ecological sensitivities, and the operational values and policies of DCR. These may include but not be limited to ATV/UTV usage, extensive adventure courses, and archery or firearm ranges. Each potential use should be carefully evaluated whether it is a good "fit" for the site and meets the operational objectives of DCR.

Site features and amenities that support broad and varied outdoor experiences will not only optimize potential visitation, but also increase the opportunities for revenue generation that can support operating costs. Revenues generated from park access, day and overnight facility use, and concession permits could be significant with the proper blend of features and amenities.

ARTRIP BENT UNIT DESIGN AND OPERATIONS

The Artrip Bent unit is located upstream of the Sugar Hill unit and other river access points, and therefore is largely expected to be utilized as a staging point for river recreationalists planning to paddle the river at varied lengths. It should also be designed as a stand-alone state park destination for users that may only be seeking the experience the park itself can provide. As a result, it is recommended the design of the Artrip Bent unit include varied overnight accommodations from camping to yurts or cabins, limited day use facilities (picnic shelters or pavilions), comfort station(s), and trails. A group camping area should also be considered at this site.

This site will require staff specifically assigned to the unit in order to properly operate and provide the necessary coverage for maintenance, visitor engagement, and security. It is possible entry into the site can be managed by an automated fee gate thereby relieving state park staff of manning an entry booth for fee collection and creating greater operational efficiency. It is also recommended to utilize park host volunteers that could provide a 24-hour presence and visitor support for the park and its guests.

SUGAR HILL UNIT DESIGN AND OPERATIONS

The Sugar Hill unit affords itself to much greater development opportunities because of its size, its topography, and its proximity to the community of St. Paul. This is a site that is likely to be enjoyed both as a day-use site for trails and other related amenities, but also as a high quality overnight stay destination. It is recommended that facility and amenity development on the Sugar Hill unit include but not be limited to:

- ◆ Primitive camping sites
- ◆ Water/electric camping sites / RV camping sites
- ◆ Cabins / yurts
- ◆ Paddle-in campsites
- ◆ Trails
- ◆ Playground / nature play area
- ◆ Comfort stations
- ◆ Day-use / picnic area with shelters
- ◆ Visitor center
 - Interpretive exhibits
 - Retail / park store
 - Multi-purpose meeting space
 - Administrative and storage space
- ◆ Maintenance shop / yard

This blend of facility/amenity development also creates robust opportunities for revenue generation to assist in off-setting operating costs. It is recommended that the state park staff that service and manage both the Artrip Bent and Sugar Hill units be based at Sugar Hill. This would require spaces to be developed that support their administrative and maintenance requirements. Finally, it is recommended that work campers / park hosts be utilized to augment staff resources in maintenance and visitor engagement.



MARKET ANALYSIS

INTRODUCTION

Virginia Department of Conservation and Recreation (DCR) selected the team that includes PROS Consulting to assist in completing a Market Analysis and Business Plan for the envisioned Clinch River State Park in western Virginia. This plan will serve the park and DCR over the next 10 years by providing strategic direction and vision for the development of this new state park and its related sites along the Clinch River. A key component of the planning process is a market opportunity analysis that identifies the most important aspects of the service market relevant to the DCR's priorities in this project, as well as an analysis of market and service opportunities based on detailed information on similar service providers in the area and emerging best practices from around country. This analysis will include identification of the service area being evaluated, a detailed demographics analysis of that service area, a national and regional trends analysis, a similar provider assessment, and program and services review.



Photo: Office of the Governor - Jack Mayer

SERVICE MARKET DELINEATION

A major focus of this Market Analysis and Business Plan is an informed evaluation of development and operational opportunities of Clinch River State Park being newly DCR. This future park will be comprised of multiple sites along the Clinch River in a "string of pearls" concept to provide river access and outdoor recreation opportunities for local residents and the region. The primary site envisioned to have the most intensive development if referred to as the Sugar Hill tract near the town of St. Paul, Virginia.

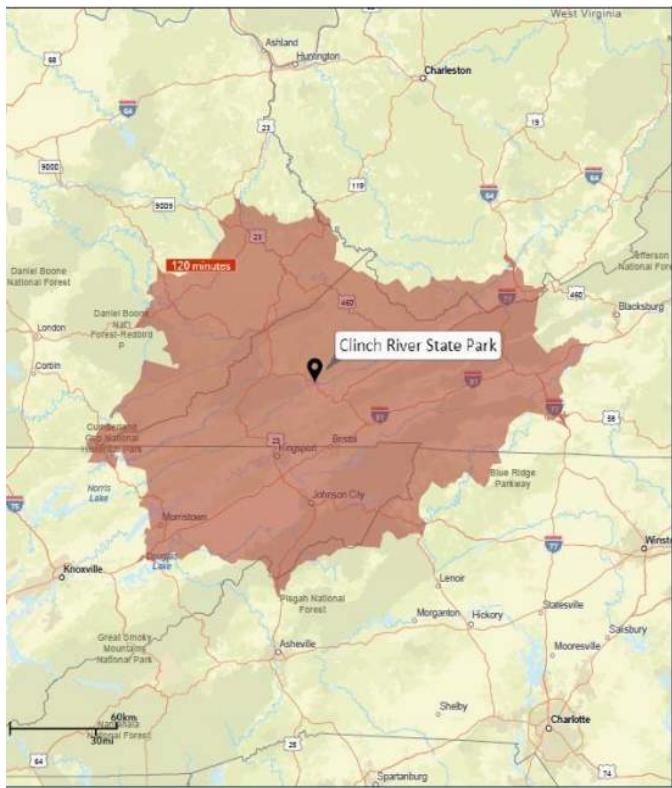


Figure 1a: Primary Service Area Boundaries

State Parks generally, and certainly Clinch River State Park, are typically regional destinations with draw and appeal for visitors that extends several hours drive time from the site. In order to evaluate the market potential and positioning of the future state park, a primary and secondary service market was identified. The primary service market is based on a two-hour (120 minutes) drive time from the Sugar Hill tract. Based on typical state park visitation patterns, it is expected that 60-75% of the visitors to the new state park will originate from within this service area. The secondary service market is based on a five-hour (300 minutes) drive time from the site. It is anticipated 25-40% of the visitors will originate from the region that extends between two hours and five hours from the site. While visitors and users may originate from beyond these service areas, this region is most likely to include the vast majority of visitors.

The map to the left illustrates that primary service area (**Figure 1a**) and the map on the following page depicts both the primary and secondary service markets combined (**Figure 1b**).

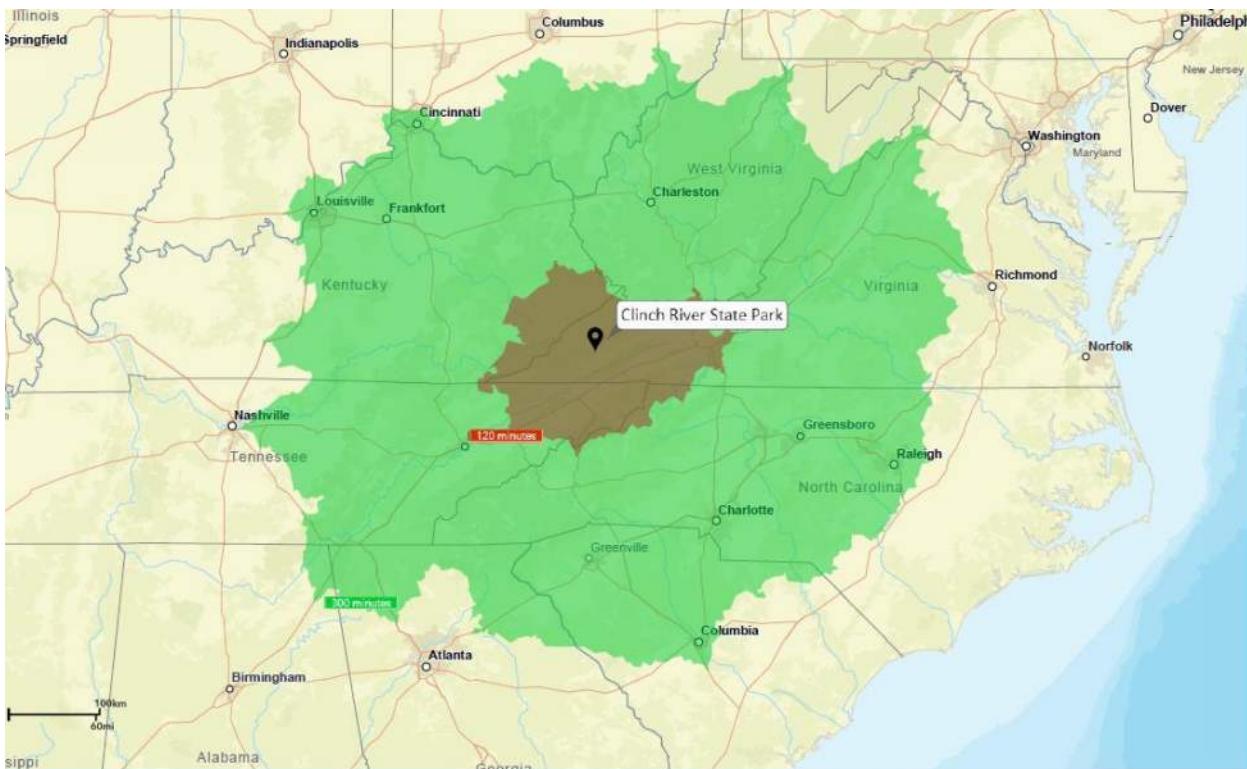


Figure 2b: Primary (120 minutes) and Secondary (300 minutes) Service Area Boundaries

The primary service area is predominantly rural, with the only real population center being the Tri-cities region of Tennessee that includes the cities of Kingsport, Bristol and Johnson City, Tennessee. Nearly 40% of the total population of the primary service area is located within that region of Tennessee which is approximately 30-35 miles south of the park site.

The secondary service area, which extends to a five-hour drive time from the park, includes several large metropolitan areas in multiple states including Cincinnati, Ohio; Lexington, Frankfort and Louisville, Kentucky; Charleston, West Virginia; Greensboro, Raleigh and Charlotte, North Carolina; Greenville and Columbia, South Carolina; and reaches to the outskirts of Nashville, Tennessee. The secondary service area even extends to within 60 miles of Atlanta, Georgia.

DEMOGRAPHICS ANALYSIS

The demographics and recreational trends analysis helps provide a thorough understanding of the demographic makeup of residents within the primary service area, assesses key economic factors, as well as identifies national, regional, and local recreational trends that are relevant to the planning process.

The demographic analysis describes the population within primary and secondary service areas of the study focus. This assessment is reflective of the region's total population and its key characteristics such as age segments, race, ethnicity, income levels, and gender. It is important to note that future projections are based on historical patterns and unforeseen circumstances during or after the time of the analysis could have a significant bearing on the validity of the projected figures.

PRIMARY SERVICE AREA DEMOGRAPHIC OVERVIEW



2021 Total Population
1,352,563



2021 Total Households
560,624



2021 Median Age
44.4 years



2021 Median Household Income
\$41,798



2021 Race
93% White 3% Black Alone
1% Asian Alone
2.65% Hispanic Origin

SECONDARY SERVICE AREA DEMOGRAPHIC OVERVIEW



2021 Total Population
23,766,036



2021 Total Households
9,437,915



2021 Median Age
40.5 years



2021 Median Household Income
\$54,881



2021 Race
77% White 14% Black Alone
2% Asian Alone
6.76% Hispanic Origin

METHODOLOGY

Demographic data used for the analysis was obtained from U.S. Census Bureau and from Environmental Systems Research Institute, Inc. (ESRI), the largest research and development organization dedicated to Geographical Information Systems (GIS) and specializing in population projections and market trends. All data was acquired in January 2022 and reflects actual numbers as reported in the 2010 Census (2020 data is not available at this time) as well as estimates for 2026 as obtained by ESRI. Straight line linear regression was utilized for 2031 and 2036 projections.

RACE AND ETHNICITY DEFINITIONS

The minimum categories for data on race and ethnicity for federal statistics, program administrative reporting, and civil rights compliance reporting are defined as below. The Census 2010 data on race are not directly comparable with data from the 2000 Census and earlier censuses; therefore, caution must be used when interpreting changes in the racial composition of the US population over time. The latest (Census 2010) definitions and nomenclature are used within this analysis.

- American Indian – This includes a person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment
- Asian – This includes a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam
- Black – This includes a person having origins in any of the black racial groups of Africa
- Native Hawaiian or Other Pacific Islander – This includes a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands
- White – This includes a person having origins in any of the original peoples of Europe, the Middle East, or North Africa
- Hispanic or Latino – This is an ethnic distinction, a subset of a race as defined by the Federal Government; this includes a person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race

Please Note: The Census Bureau defines Race as a person's self-identification with one or more of the following social groups: White, Black or African American, Asian, American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, some other race, or a combination of these. While Ethnicity is defined as whether a person is of Hispanic / Latino origin or not. For this reason, the Hispanic / Latino ethnicity is viewed separate from race throughout this demographic analysis.

SERVICE AREA POPULACE

This demographic analysis provides a basic understanding of the population characteristics of the residents that live within the primary and secondary service markets (two-hour and five-hour drive) of Clinch River State Park. The analysis that follows identifies multiple demographic characteristics of interest for this project including:

- Overall size of the service area populations by individuals, households, age segments, and race
- Economic status and spending power demonstrated by household income statistics
- Influence of demographic trends on recreation participation

POPULATION AND HOUSEHOLDS

The total 2021 population of both the primary and secondary service area is estimated to be 21,674,528 comprised of 9,47,915 total estimated households. The population within the primary service area accounts for only 6% of the population within the five-hour drive (secondary service area) with an estimated 1,352,563 residents in 2021. A table summarizing the population of both the primary and secondary service areas is provided below (**See Figure 3**). These illustrate the population as accounted in the 2010 U.S. Census, and updated projections for 2021 and 2026¹. Note the highlighted cells indicating that the degree of projected change expected in the primary service area is drastically different than the expected growth within the secondary service area.

	Estimated Primary Service Area Population	Estimated Primary Service Area Households	Estimated Secondary Service Area Population	Estimated Secondary Service Area Households
2010	1,310,927	540,843	21,674,528	8,599,438
2021	1,352,563	560,624	23,766,036	9,437,915
2026	1,358,409	563,840	24,725,551	9,823,597
Growth from 2010 to 2021	41,636	19,781	2,091,508	838,477
% Change from 2010 to 2021	3.2%	3.7%	9.6%	9.8%

Figure 3: Primary and Secondary Service Areas' Total Population and Households

KEY TOTAL POPULATION AND HOUSEHOLD FINDINGS

The key findings of the total population and household analysis are detailed as follows:

1. The population of the primary service has not increased significantly in the last 10 years (0.29% annual growth rate) when compared with the national annual growth rate of 0.86%. The secondary service area population has grown by a much faster annual rate more comparable to the national average (0.88%).
2. The total population of the secondary service area population is substantially larger than the primary service area, indicating the potential for a significant number of visitors that could potentially originate from beyond a two-hour drive from the state park.
3. The growth in number of households is larger than the total population growth rate in both primary and secondary service areas indicating average household size is decreasing. This could be attributable to growth in the number of single individual and young family households.

¹ Detailed 2020 census data beyond total population is not currently available for this geography. In order to maintain data integrity throughout the entire demographics analysis, the 2021 estimates from ESRI were utilized.

AGE SEGMENTATION

Evaluating the service areas by age segments, the population of the primary services area is primarily older given that 37% are within the 55+ years age segment compared to 25% of the population falling within the 35-54 segment. The primary service area has a median age of 44.4 years old which is higher than the U.S. median age of 38.1 years. Assessing the population as a whole, the region is projected to continue its current aging trend. Over the next 15 years, the 55+ population is expected to grow to represent 44% of the region's total population. This is largely due to the increased life expectancies and the remainder of the Baby Boomer generation shifting into the senior age groups. (**See Figure 4a**).

Incidentally, the population of the secondary service area is more middle-aged with a slight skew to older with 32% of the population at 55+ years of age. Over the next 15 years, the 55+ population is expected to grow to represent 37% of the region's total population. This is illustrated in **Figure 4b**.

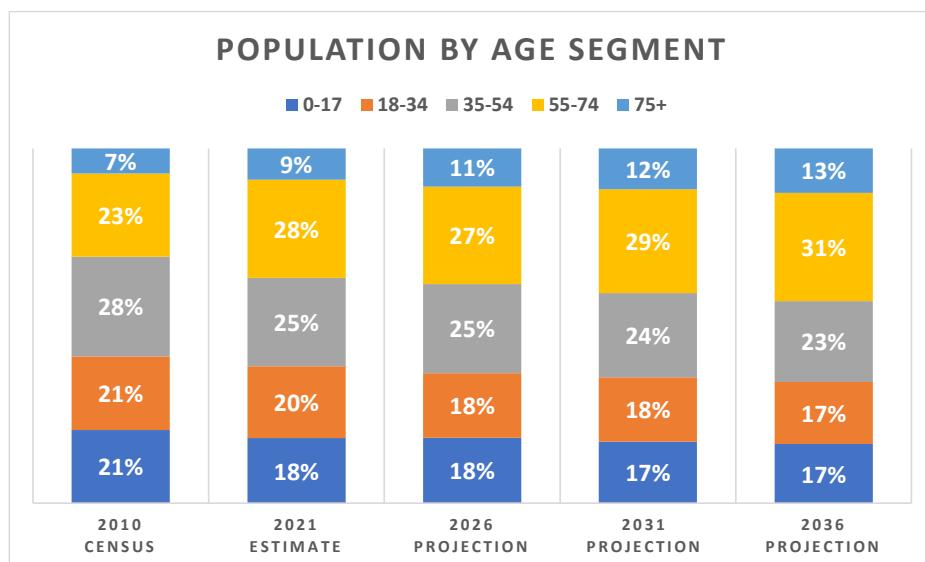


Figure 4a: Primary Service Area's Population by Age Segments

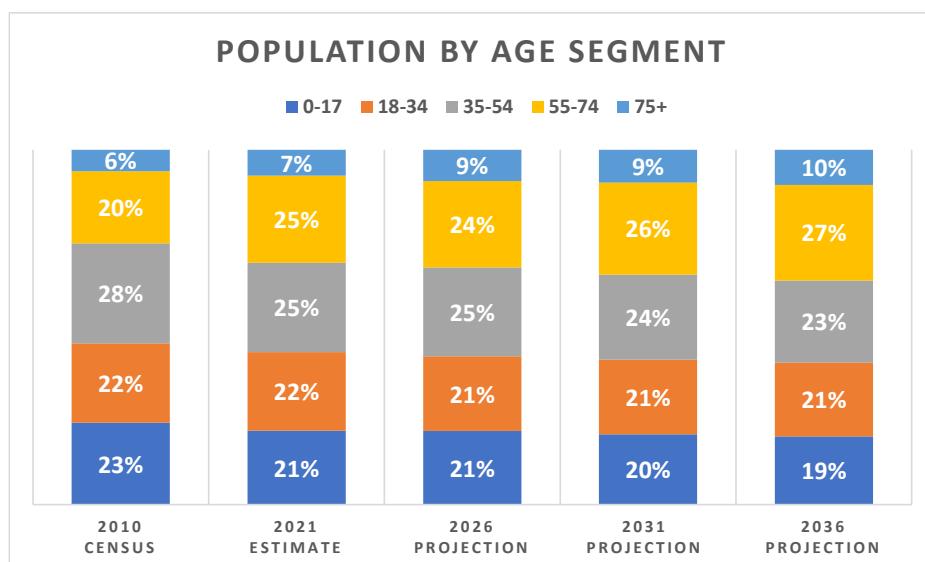


Figure 4b: Secondary Service Area's Population by Age Segments

RACE

Analyzing race, the current population of both service areas current is mostly White Alone, with a considerably more diverse population in the secondary service area. This is attributable to the multiple major metropolitan areas included in the secondary region. The 2021 estimate shows that 93% of the population falls into the White Alone category within a two-hour drive of the park, while that category only comprises 77% of the population in the secondary service area. The Black Alone (13%) category by far represents the largest minority group in both regions. The racial diversification of the secondary service area is only slightly less diverse than the national population, which is approximately 70% White Alone, 13% Black Alone, and 7% Some Other Race. The predictions for 2036 expect both region's population to continue diversifying at a fairly slow rate, with the White Alone population projected to decrease by only 3% as a proportion of the entire population and the minority categories expected to experience very slight increases. (**Figures 5a and 5b**)

ETHNICITY

The region's population was also assessed based on Hispanic/Latino ethnicity, which by the Census Bureau definition is viewed independently from race. It is important to note that individuals who are Hispanic / Latino in ethnicity can also identify with any of the racial categories from above. Based on the 2010 Census, it is estimated in 2021 those of Hispanic/Latino origin represent roughly 3% of the primary service area's current population, which is significantly lower than the national average (18% Hispanic/Latino). The Hispanic/ Latino population of the secondary service area accounts for approximately 7% of the total population which is still below the national average. This portion of the population is expected to grow only slightly over the next 15 years in both service areas. (**Figures 6a and 6b**)

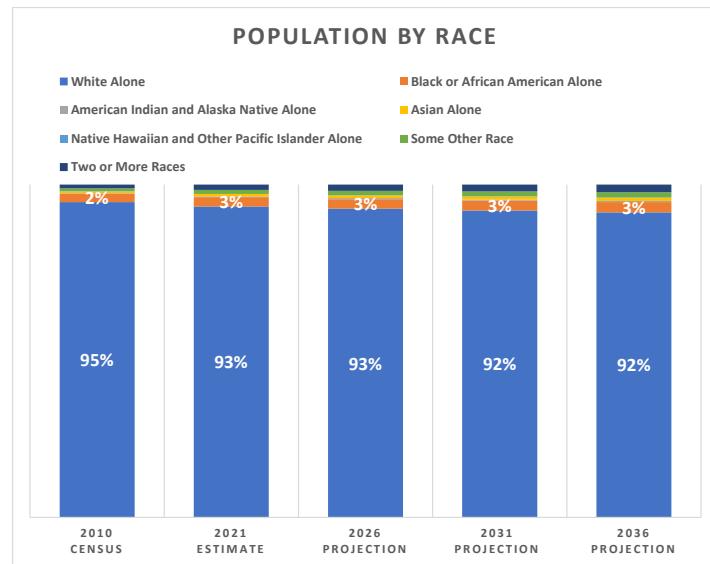


Figure 5a: Primary Service Area's Population by Race

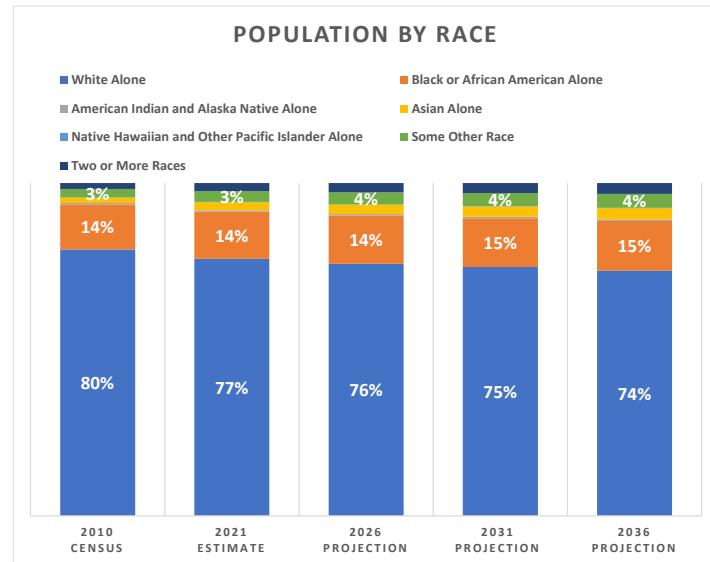


Figure 5b: Secondary Service Area's Population by Race

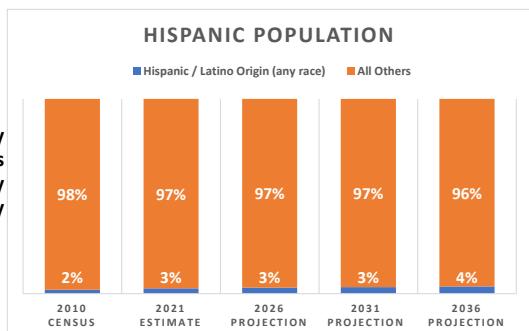


Figure 6a: Primary Service Area's Population by Ethnicity

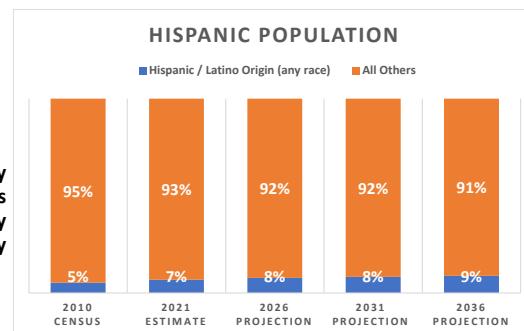


Figure 6b: Secondary Service Area's Population by Ethnicity

HOUSEHOLD INCOME

The primary service area's per capita income (\$24,374) and median household income (\$41,798) are considerably lower than current State of Virginia statistics (\$40,635 and \$74,456) and the national averages (\$35,672 and \$65,712). Incidentally, the secondary service area's per capita income (\$30,564) and median household income (\$54,881) are still lower than current State of Virginia statistics, but closer to the national averages. Additionally, as seen in **Figures 7a and 7b**, both the per capita income and median household income of both regions are expected to grow modestly over the next 15 years. A comparison of income characteristics of the primary and secondary service areas with that of Virginia (state-wide) and the U.S. is provided in **Figures 8a and 8b**.

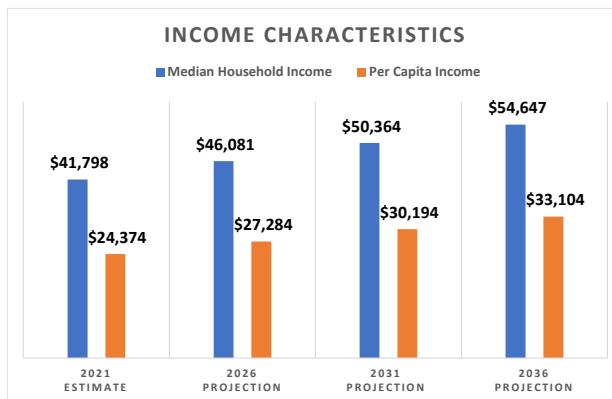


Figure 7a: Primary Service Area's Income Characteristics

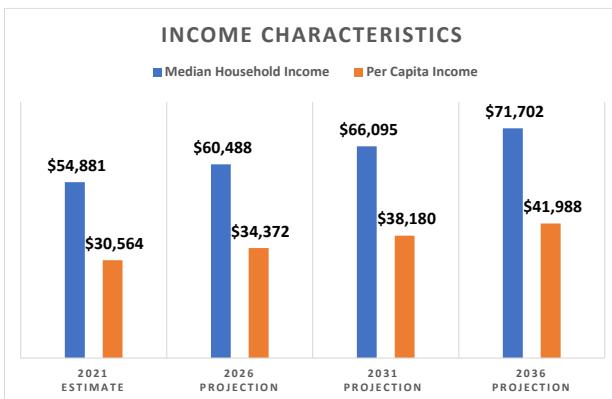


Figure 7b: Secondary Service Area's Income Characteristics

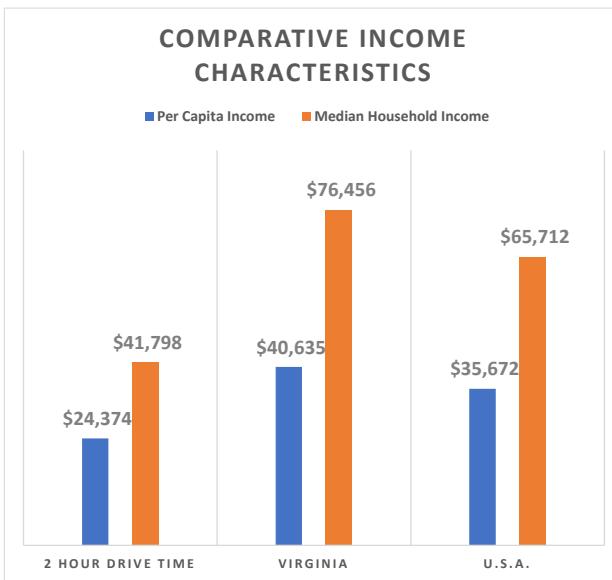


Figure 8a: Primary Service Area Comparative Income Characteristics

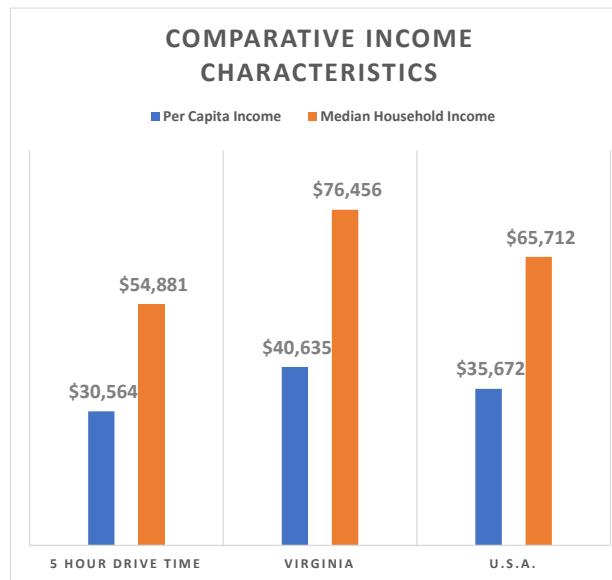


Figure 8b: Secondary Service Area Comparative Income Characteristics

GENDER

Both primary and secondary services areas currently has a slightly higher female population (51%) than male (49%). This is expected to remain fairly unchanged over the next 15 years, as shown in **Figure 9**.

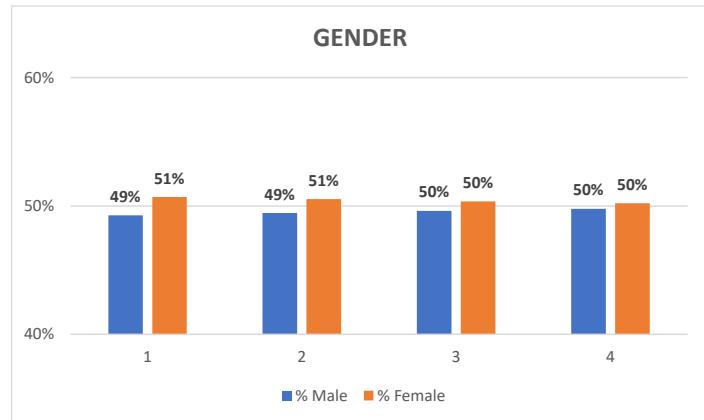


Figure 9: Primary Service Area's Gender Breakdown

KEY DEMOGRAPHIC FINDINGS

- The primary service area's **population annual rate of change** (0.29%) is considerably slower than the national annual population growth rate (0.86%), but the secondary service area annual growth is more aligned with the national average (0.88%).
- The region's **average household size** is slightly less in both in both the primary service area (2.34) and secondary service area (2.45) than the national (2.53) average.
- When assessing **age segments**, the service area reflects a predominantly middle-aged and older populace with continued growth in the proportion of older adults (55+ years) to the entire population anticipated over the next 10-15 years particularly within a two-hour drive of the state park.
- The region's **racial distribution** is mostly White Alone with a much larger population of those who identify as Black Alone in the secondary service market and small populations of people who identify as Asian or Some Other Race populations. Overall, this region is less diverse when compared to national percentage racial population distribution.
- The region's percentage of **Hispanic/Latino population** (primary service area = 2.65%; secondary service area = 6.67%) is significantly lower than the national average (18.3%).
- The primary service area's **per capita income** (\$24,374) and **median household income** (\$41,798) are both considerably lower when compared to Virginia's (\$40,635 and \$76,456) and the national (\$35,672 and \$65,712) income characteristics. The secondary service area income statistics (\$30,564 and \$54,881) are closer to the national averages, but remain lower than Virginia's state averages.

Additionally, we are seeing the annual trends detailed below in total population growth, growth of number of households including family households, number of owner-occupied households, and median household income over the next five years (2021-2026) in the broader secondary service market.

Trends: 2021-2026 Annual Rate	
Population	0.79%
Households	0.80%
Families	0.69%
Owner Households	0.96%
Median Household Income	1.96%

RECREATION TRENDS ANALYSIS

The trends analysis is intended to provide an understanding of national, regional, and local recreational trends. This analysis examines participation trends, activity levels, and programming trends. It is important to note that all trends are based on current and/or historical patterns and participation rates.

NATIONAL TRENDS IN RECREATION

METHODOLOGY

The Sports & Fitness Industry Association's (SFIA) *Sports, Fitness & Leisure Activities Topline Participation Report 2021* was utilized in evaluating the following trends:

- National Recreation Participatory Trends
- Core vs. Casual Participation Trends
- Non-Participant Interest by Age Segment



The study is based on findings from surveys carried out in 2020 by the Physical Activity Council (PAC), resulting in a total of 18,000 online interviews. Surveys were administered to all genders, ages, income levels, regions, and ethnicities to allow for statistical accuracy of the national population. A sample size of 18,000 completed interviews is considered by SFIA to result in a high degree of statistical accuracy. A sport with a participation rate of five percent has a confidence interval of plus or minus 0.32 percentage points at a 95 percent confidence level. Using a weighting technique, survey results are applied to the total U.S. population figure of 303,971,652 people (ages six and older).

The purpose of the report is to establish levels of activity and identify key participatory trends in recreation across the U.S. This study looked at 118 different sports/activities and subdivided them into various categories including: sports, fitness, outdoor activities, aquatics, etc.

CORE VS. CASUAL PARTICIPATION

In addition to overall participation rates, SFIA further categorizes active participants as either core or casual participants based on frequency of participation. Core participants have higher participatory frequency than casual participants. The thresholds that define casual versus core participation may vary based on the nature of each individual activity. For instance, core participants engage in most fitness activities more than 50-times per year, while for sports, the threshold for core participation is typically 13-times per year.

In a given activity, core participants are more committed and tend to be less likely to switch to other activities or become inactive (engage in no physical activity) than causal participants. This may also explain why activities with more core participants tend to experience less pattern shifts in participation rates than those with larger groups of casual participants.

INACTIVITY RATES / ACTIVITY LEVEL TRENDS

SFIA also categorizes participation rates by intensity, dividing activity levels into five categories based on the caloric implication (i.e., high calorie burning, low/med calorie burning, or inactive) and the frequency of participation (i.e., 1-50 times, 50-150 times, or above) for a given activity. Participation rates are expressed as 'super active' or 'active to a healthy level' (high calorie burning, 151+ times), 'active' (high calorie burning, 50-150 times), 'casual' (high calorie burning, 1-50 times), 'low/med calorie burning', and 'inactive'. These participation rates are then assessed based on the total population trend over the last five years, as well as breaking down these rates by generation.

IMPACT OF COVID-19

229.7 million people ages 6 and over reported being active in 2020, which is a 3.6% increase from 2019 and the greatest number of active Americans since 2007. With a shift towards working remotely and children moved to virtual learning, free time increased. This, coupled with stay-at-home orders and general decisions to keep out of public places, put an emphasis on the public finding ways to occupy their time.

Participation in sports and activities that allowed people to be socially distant saw significant increases. These activities included pickleball, tennis, golf, trail running, skateboarding, surfing, day hiking, and recreational kayaking. In general, outdoor sports and racquet sports had the largest increase in participation compared to their 2019 numbers.

As could be expected, team sports, showed consistent drops in participation with all but 5 of the 23 tracked team sports showing decreases in overall participation. The team sports like Basketball and Soccer, that did show an increase of participation in 2020 can be attributed to recreational or backyard play, which is counter to the trend of the past decade.

With gyms and health clubs being forced to close in most of the country, fitness participation levels overall decreased in 2020. However, home fitness activities that can be practiced at home, like Yoga, Pilates, and Dumbbells/Hand Weights, showed significant participation increases, while activities done generally in health clubs, studios, or pools like Aquatic Exercise, Group Stationary Cycling, Stair-Climbing Machine, and Cardio Kickboxing, experienced substantial declines.

NATIONAL RECREATION PARTICIPATORY TRENDS

While the SFIA report provides national trend data across a wide range of recreational activities including general sports and fitness, this trends analysis only focuses on that activities that could be relevant to programs, services and potential visitor experiences relevant to Clinch River State Park. Those activities include outdoor recreation and water sports / activities.

NATIONAL TRENDS IN OUTDOOR RECREATION

PARTICIPATION LEVELS

Results from the SFIA report demonstrate strong growth in participation regarding outdoor/adventure recreation activities. Much like the general fitness activities, these activities encourage an active lifestyle, can be performed individually or with proper social distancing in a group, and are not as limited by time constraints. In 2020, the most popular activities, in terms of total participants, from the outdoor/adventure recreation category include: Day Hiking (57.8 million), Road Bicycling (44.5 million), Freshwater Fishing (42.6 million), Camping within $\frac{1}{4}$ mile of Vehicle/Home (36.1 million), and Recreational Vehicle Camping (17.8 million).



**Hiking
(Day)
57.8 million**



**Bicycling
(Road)
44.5 million**



**Fishing
(Freshwater)
42.6 million**



**Camping
(< $\frac{1}{4}$ mi. of Car/Home)
36.1 million**



**Camping
(Recreational Vehicle)
17.8 million**

FIVE-YEAR TREND

From 2015-2020, Day Hiking (55.3%), BMX Bicycling (44.2%), Skateboarding (37.8%), Camping within ¼ mile of Vehicle/Home (30.1%), and Fly Fishing (27.3%) have undergone the largest increases in participation. The five-year trend also shows activities such as Adventure Racing (-31.4%), In-Line Roller Skating (-18.8%), Archery (-13.5%), and Traditional Climbing (-4.5%) to be the only activities with decreases in participation.

ONE-YEAR TREND

The one-year trend shows almost all activities growing in participation from the previous year. The most rapid growth being in Skateboarding (34.2%), Camping within ¼ mile of Vehicle/Home (28.0%), Birdwatching (18.8%), and Day Hiking (16.3%). Over the last year, the only activities that underwent decreases in participation were Adventure Racing (-8.3%) and Archery (-2.7%).

CORE VS. CASUAL TRENDS IN OUTDOOR RECREATION

A majority of outdoor activities have experienced participation growth in the last five- years. Although this a positive trend, it should be noted that all outdoor activities participation, besides adventure racing, consist primarily of casual users. *Please see Appendix A for full Core vs. Casual Participation breakdown.*

National Participatory Trends - Outdoor / Adventure Recreation					
Activity	Participation Levels			% Change	
	2015	2019	2020	5-Year Trend	1-Year Trend
Hiking (Day)	37,232	49,697	57,808	55.3%	16.3%
Bicycling (Road)	38,280	39,388	44,471	16.2%	12.9%
Fishing (Freshwater)	37,682	39,185	42,556	12.9%	8.6%
Camping (< 1/4 Mile of Vehicle/Home)	27,742	28,183	36,082	30.1%	28.0%
Camping (Recreational Vehicle)	14,699	15,426	17,825	21.3%	15.6%
Birdwatching (>1/4 mile of Vehicle/Home)	13,093	12,817	15,228	16.3%	18.8%
Fishing (Saltwater)	11,975	13,193	14,527	21.3%	10.1%
Backpacking Overnight	10,100	10,660	10,746	6.4%	0.8%
Bicycling (Mountain)	8,316	8,622	8,998	8.2%	4.4%
Skateboarding	6,436	6,610	8,872	37.8%	34.2%
Fishing (Fly)	6,089	7,014	7,753	27.3%	10.5%
Archery	8,378	7,449	7,249	-13.5%	-2.7%
Climbing (Indoor)		5,309	5,535	n/a	4.3%
Roller Skating, In-Line	6,024	4,816	4,892	-18.8%	1.6%
Bicycling (BMX)	2,690	3,648	3,880	44.2%	6.4%
Climbing (Traditional/Ice/Mountaineering)	2,571	2,400	2,456	-4.5%	2.3%
Climbing (Sport/Boulder)		2,183	2,290	n/a	4.9%
Adventure Racing	2,864	2,143	1,966	-31.4%	-8.3%
NOTE: Participation figures are in 000's for the US population ages 6 and over					
Legend:		Large Increase (greater than 25%)	Moderate Increase (0% to 25%)	Moderate Decrease (0% to -25%)	Large Decrease (less than -25%)

Figure 10: Outdoor / Adventure Recreation Participatory Trends

NATIONAL TRENDS IN WATER SPORTS / ACTIVITIES

PARTICIPATION LEVELS

The most popular water sports / activities based on total participants in 2020 were Recreational Kayaking (13.0 million), Canoeing (9.6 million), and Snorkeling (7.7 million). It should be noted that water activity participation tends to vary based on regional, seasonal, and environmental factors. A region with more water access and a warmer climate is more likely to have a higher participation rate in water activities than a region that has a long winter season or limited water access. Therefore, when assessing trends in water sports and activities, it is important to understand that fluctuations may be the result of environmental barriers which can greatly influence water activity participation.



**Kayaking
13.0 Million**



**Canoeing
9.6 Million**



**Snorkeling
7.7 Million**



**Jet Skiing
4.9 Million**



**Surfing
3.8 Million**

FIVE-YEAR TREND

Over the last five years, Surfing (40.7%), Recreational Kayaking (36.9%) and Stand-Up Paddling (21.7%) were the fastest growing water activities. White Water Kayaking (3.5%) was the only other activity with an increase in participation. From 2015-2020, activities declining in participation most rapidly were Boardsailing/Windsurfing (-28.2%), Water Skiing (-22.7%), Jet Skiing (-21.8%), Scuba Diving (-21.0%), Sea Kayaking (-18.5%), and Sailing (-15.0%).

ONE-YEAR TREND

Similarly, to the five-year trend, Surfing (28.2%) and Recreational Kayaking (14.2%) also had the greatest one-year growth in participation, from 2019-2020. Activities which experienced the largest decreases in participation in the most recent year include: Boardsailing/Windsurfing (-9.8%), Sea Kayaking (-5.4%), and Water Skiing (-4.8%)

CORE VS. CASUAL TRENDS IN WATER SPORTS/ACTIVITIES

As mentioned previously, regional, seasonal, and environmental limiting factors may influence the participation rate of water sport and activities. These factors may also explain why all water-based activities have drastically more casual participants than core participants, since frequencies of activities may be constrained by uncontrollable factors. These high causal user numbers are likely why a majority of water sports/activities have experienced decreases in participation in recent years. *Please see Appendix A for full Core vs. Casual Participation breakdown.*

National Participatory Trends - Water Sports / Activities					
Activity	Participation Levels			% Change	
	2015	2019	2020	5-Year Trend	1-Year Trend
Kayaking (Recreational)	9,499	11,382	13,002	36.9%	14.2%
Canoeing	10,236	8,995	9,595	-6.3%	6.7%
Snorkeling	8,874	7,659	7,729	-12.9%	0.9%
Jet Skiing	6,263	5,108	4,900	-21.8%	-4.1%
Surfing	2,701	2,964	3,800	40.7%	28.2%
Stand-Up Paddling	3,020	3,562	3,675	21.7%	3.2%
Sailing	4,099	3,618	3,486	-15.0%	-3.6%
Rafting	3,883	3,438	3,474	-10.5%	1.0%
Water Skiing	3,948	3,203	3,050	-22.7%	-4.8%
Wakeboarding	3,226	2,729	2,754	-14.6%	0.9%
Kayaking (White Water)	2,518	2,583	2,605	3.5%	0.9%
Scuba Diving	3,274	2,715	2,588	-21.0%	-4.7%
Kayaking (Sea/Touring)	3,079	2,652	2,508	-18.5%	-5.4%
Boardsailing/Windsurfing	1,766	1,405	1,268	-28.2%	-9.8%

NOTE: Participation figures are in 000's for the US population ages 6 and over

Legend:	Large Increase (greater than 25%)	Moderate Increase (0% to 25%)	Moderate Decrease (0% to -25%)	Large Decrease (less than -25%)	
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Figure 11: Water Sports/Activities Participatory Trends

REGIONAL SPORTS AND LEISURE MARKET POTENTIAL

The following charts show sport and leisure market potential data for residents of the primary and secondary service areas, as provided by ESRI. Market Potential Index (MPI) measures the probable demand for a product or service within the defined service areas. The MPI shows the likelihood that an adult resident will participate in certain activities when compared to the U.S. national average. The national average is 100; therefore, numbers below 100 would represent lower than average participation rates, and numbers above 100 would represent higher than average participation rates. The service area is compared to the national average in two (2) categories –outdoor activity and commercial recreation.

MPI scores are a tool that DCR can use for consideration when starting new programs or developing new facilities and amenities. The market potential gives DCR a starting point for estimating resident attendance and participation for a broad set of recreational activities. **Of important note is that outdoor recreation participation trends for the secondary service area are reported as considerably higher than that of the primary service region, indicating that proportionally stronger visitation to Clinch River State Park is likely to originate from beyond a two-hour drive time from the park.**

MPIs for the primary service region's residents generally demonstrate market potential figures ranging lower than the national average across all categories that were assessed. The top five activities based on MPI were Fresh Water Fishing (154), Overnight Camping in the Last 12 Months (109), Spent \$250+ on Sport and Rec Equipment (104), Spent \$1-99 on Sport and Rec Equipment (93), and Salt Water Fishing (92). **Only 12% of all activities assessed in the primary service area had MPI scores above the national average,** which suggests while the more local regional population may not be as inclined to utilize the state park facilities as those in the secondary service area.

MPIs for the secondary service area's residents were still generally lower than national averages in most activities assessed, but higher than that of the primary service area. The top five activities based on MPI were Fresh Water Fishing (121), Spent \$250+ on Sport and Rec Equipment (104), Overnight Camping in the Last 12 Months (102), Spent \$1-99 on Sport and Rec Equipment (100), and Spent \$100-249 on Sport and Rec Equipment (99). Canoeing / Kayaking was close behind with an MPI of 98. **Only 15% of all activities assessed in the primary service area had MPI scores above the national average**

The following charts compare MPI scores for 26 sport and leisure activities that are prevalent for residents within the service regions relevant to the programs, services and visitor experiences most relevant to the future Clinch River State Park. The activities are categorized by activity type and listed in descending order, from highest to lowest MPI score. High index numbers (100+) are significant because they demonstrate that there is a greater likelihood that residents within the service areas will actively participate in offerings provided by the organization.

OUTDOOR ACTIVITY MARKET POTENTIAL

While the Outdoor Activity category featured the highest overall MPI score for any one activity across the categories analyzed, general Commercial Recreation scores were higher overall. Assessing MPI scores for the Outdoor Activity Category reveals only one activity in both service areas above national average MPI which was Fresh Water Fishing. The lowest activities based on MPI were Mountain Biking and Backpacking. **Figures 12a and 12b** below feature MPI scores for both the primary and secondary service areas.

Figure 12a: Primary Service Area
Outdoor/Adventure Activities MPI

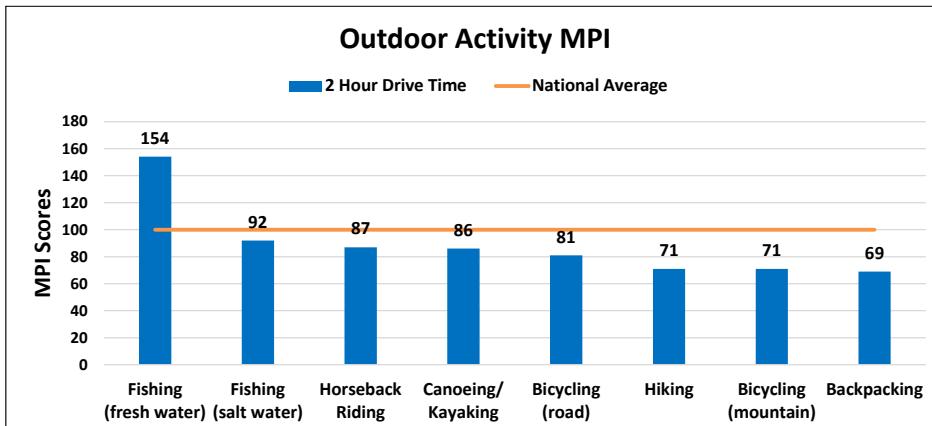
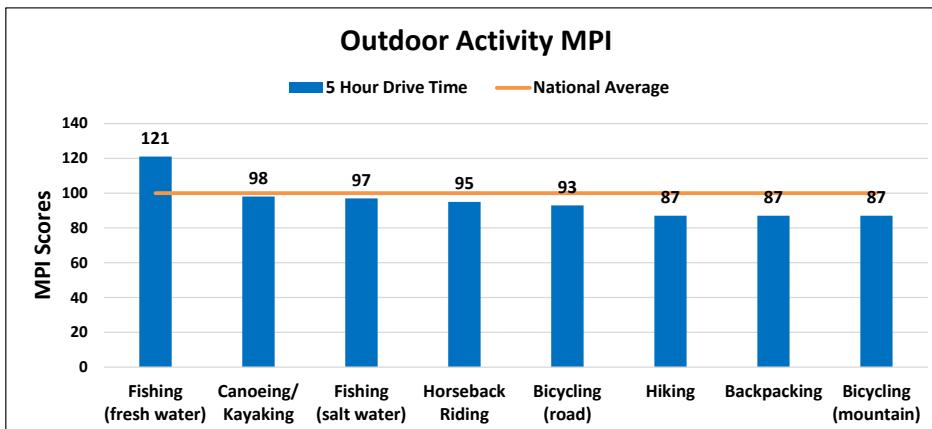


Figure 12b: Secondary Service Area
Outdoor/Adventure Activities MPI



COMMERCIAL RECREATION MARKET POTENTIAL

The Commercial Recreation category also reveals a small number of activities with MPI scores above the national average in both the primary and secondary service areas. Relevant to the types of experiences relevant to Clinch River State Park, in both regions Spent \$250+ on Sports Rec Equipment and Went Overnight Camping in the Last 12 Months were among the highest MPI of all activities in this study. The lowest MPI activities were Went to a Dance Performance and Went to a Museum within the last 12 months. **Figures 13a and 13b** below and on the following page illustrate the MPI scores for 18 commercial recreation activities in both the primary and secondary service areas.

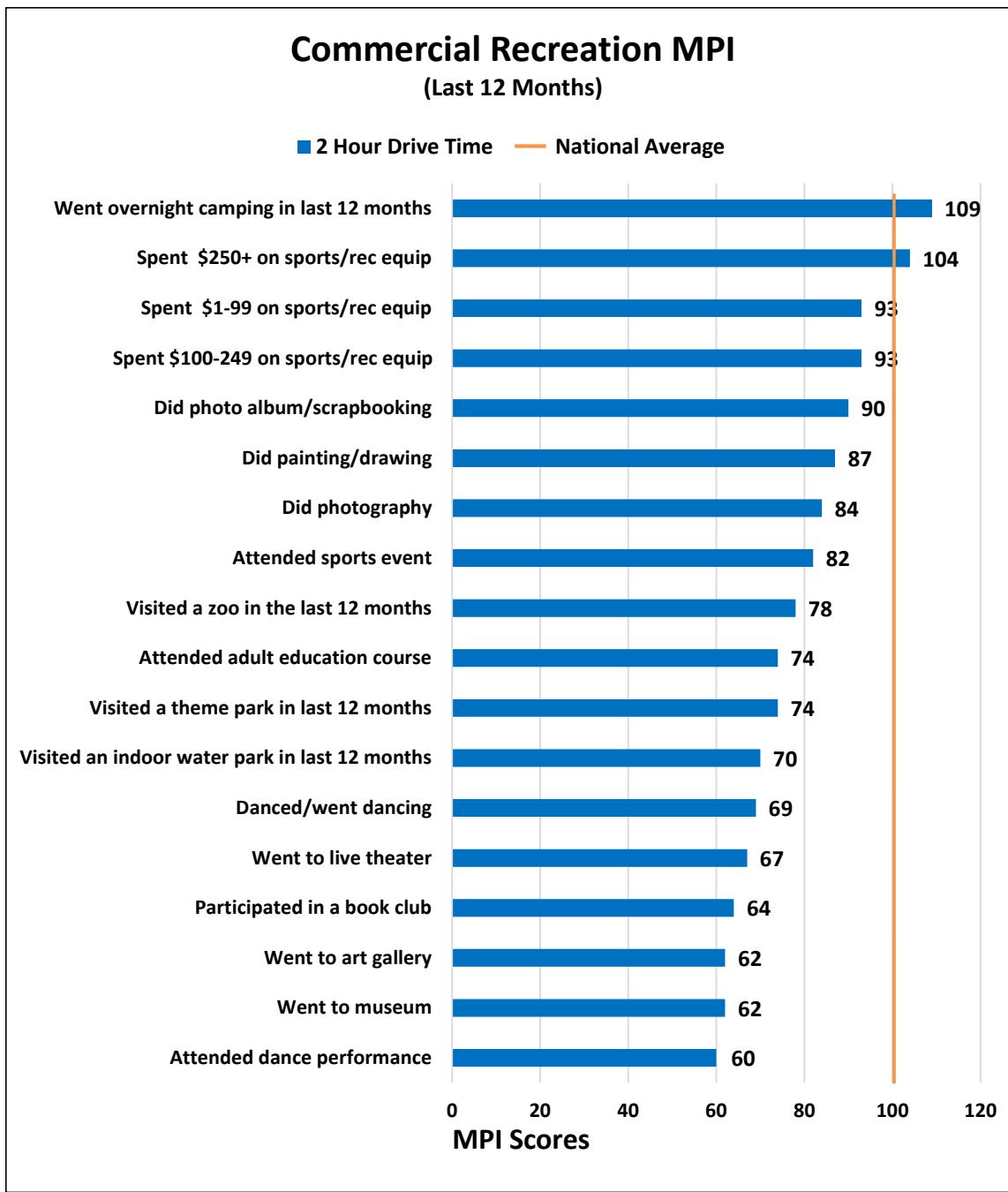


Figure 13a: Primary Service Area Commercial Recreation MPI

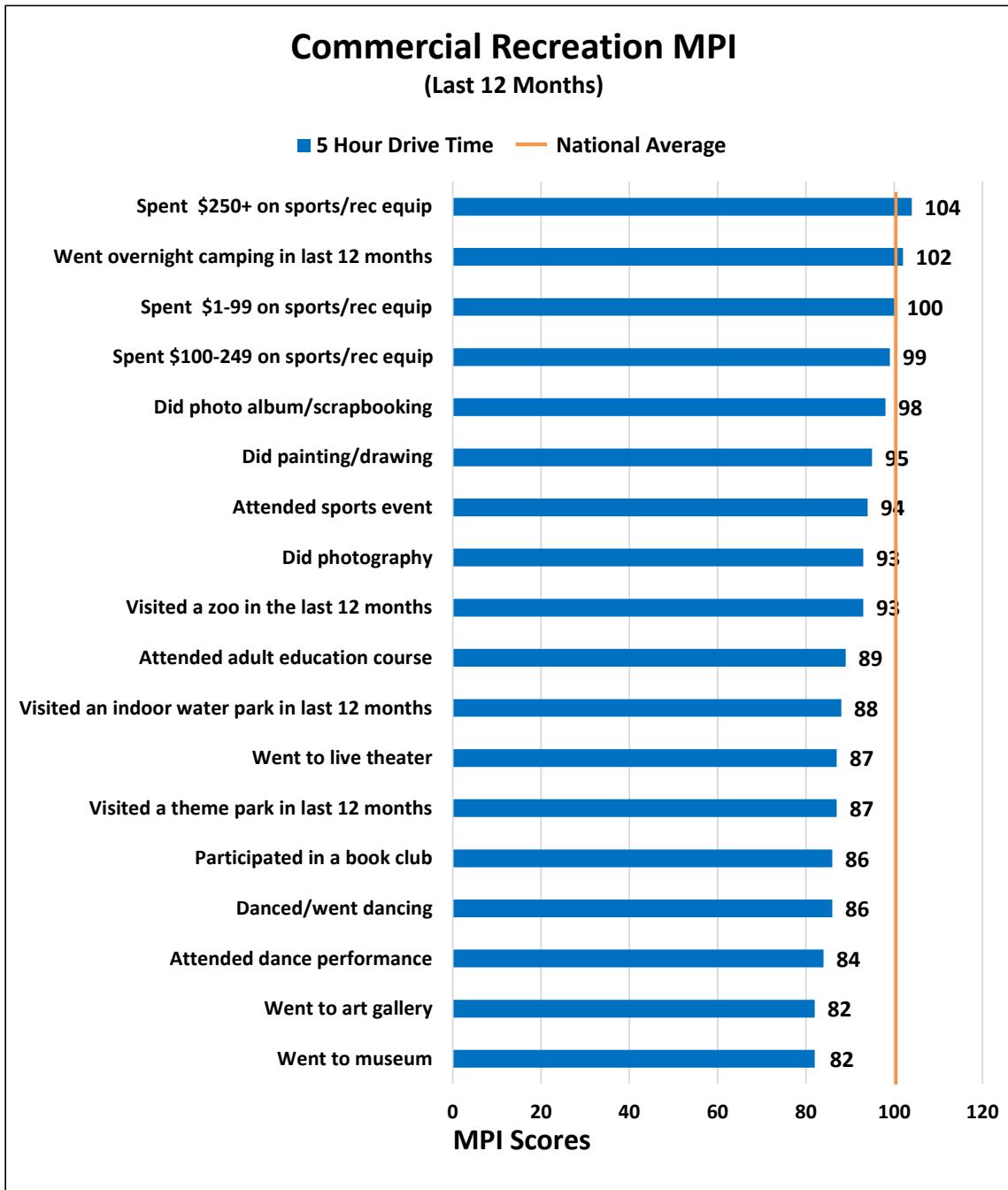


Figure 13b: Secondary Service Area Commercial Recreation MPI

DETAILED OUTDOOR RECREATION PARTICIPATION RATES

Supporting these statistics are the findings from the recently completed *2021 Outdoor Recreation Participation Report*, conducted in 2020 by the Outdoor Industry Foundation. During the 2020 calendar year a total of 18,000 online interviews were carried out with a nationwide sample of individuals and households. The total panel has over one million members and is maintained to be representative of the US population.

Oversampling of ethnic groups took place to boost response from typically under-responding groups. A weighting technique was used to balance the data to reflect the total US population aged six and above. The following variables were used: gender, age, income, household size, region and population density. The total population figure used was 303,971,652 people aged six and above. The report details participation among all Americans, youth, young adults and adults.

From these results, a current and accurate picture of outdoor recreation participation trends can be ascertained. The following pages summarize some of the key findings associated with this report.²

Some of the activities with the greatest levels of participation that are relevant to this study are presented in the table below.³ Participation is measured in millions of people and percentage of total U.S. population. Note the dramatic increase in total number of participants from 2019 to 2020, which is the single largest one-year jump in participation on record (**Figure 14**).

Activity	Participation (millions)	Percent of Population
Running, Jogging and Trail Running	63.8	21.0%
Hiking	57.8	19.0%
Freshwater, Saltwater and Flyfishing	54.7	18.0%
Road Biking, Mountain Biking and BMX	52.7	17.3%
Car, Backyard, Backpacking and RV Camping	47.9	15.8%

OUTDOOR PARTICIPATION GROWS AMID COVID-19

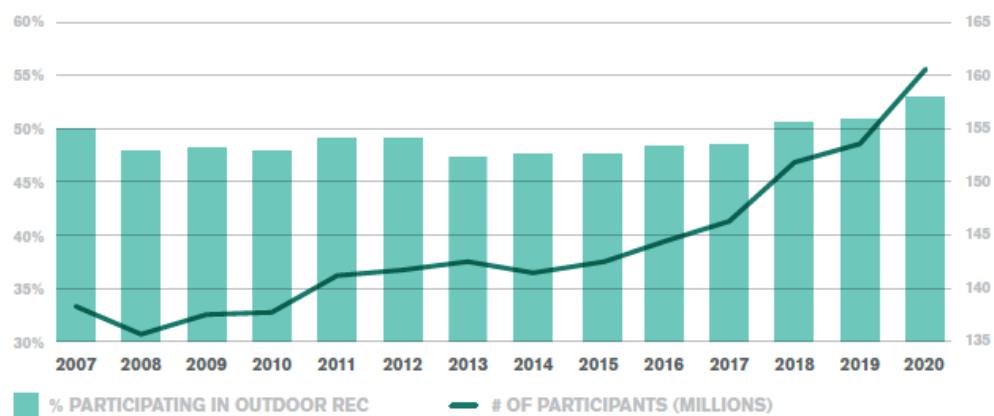


Figure 14: Outdoor Participation Trend 2007 - 2020

² Outdoor Industry Foundation. *Outdoor Recreation Participation Study: 2021*, 23rd Edition. Boulder, Colorado, 2021.

³ Outdoor Industry Foundation. *Outdoor Recreation Participation Study: 2021*, 23rd Edition. Boulder, Colorado, 2021.

The tables below detail the most popular outdoor activities in 2020 by reported personal income, age segment, and race.⁴

Interest Level	Under \$25,000	\$25,000-\$49,000	\$50,000-\$74,999	\$75,000-\$99,999	\$100,000+
1	Fishing	Fishing	Hiking	Hiking	Hiking
2	Hiking	Hiking	Fishing	Working out w/weights	Working out w/weights
3	Camping	Camping	Camping	Fishing	Yoga
4	Working out w/weights	Working out w/weights	Working out w/weights	Cardio Fitness	Cardio Fitness
5	Yoga	Yoga	Cardio Fitness	Working out w/machines	Working out w/machines

Interest Level	Ages 6-12	Ages 13-17	Ages 18-24	Ages 25-34	Ages 35-44	Ages 45-54	Ages 55-64	Ages 65+
1	Basketball	Basketball	Running	Running	Hiking	Hiking	Hiking	Fishing
2	Soccer	Fishing	Yoga	Hiking	Yoga	Fishing	Fishing	Hiking
3	Fishing	Running	Hiking	Cardio Fitness	Camping	Working out w/weights	Working out w/weights	Working out w/machines
4	Camping	Camping	Working out w/weights	Yoga	Cardio Fitness	Camping	Working out w/machines	Working out w/weights
5	Baseball	Hiking	Cardio Fitness	Working out w/weights	Working out w/weights	Cardio Fitness	Cardio Fitness	Swimming for Fitness

Interest Level	Asians	African Americans	Hispanics	Whites
1	Running, Jogging and Trail Running 25%	Running, Jogging and Trail Running 17%	Running, Jogging and Trail Running 21%	Hiking 22%
2	Hiking 22%	Road Biking, Mountain Biking and BMX 12%	Road Biking, Mountain Biking and BMX 17%	Freshwater, Saltwater and Fly Fishing 19%
3	Road Biking, Mountain Biking and BMX 16%	Freshwater, Saltwater and Fly Fishing 11%	Hiking 17%	Car, Backyard, Backpacking and RV Camping 18%
4	Car, Backyard, Backpacking and RV Camping 12%	Car, Backyard, Backpacking and RV Camping 7%	Car, Backyard, Backpacking and RV Camping 16%	Road Biking, Mountain Biking and BMX 17%
5	Freshwater, Saltwater and Fly Fishing 10%	Hiking 6%	Freshwater, Saltwater and Fly Fishing 14%	Running, Jogging and Trail Running 16%

⁴ Outdoor Industry Foundation. Outdoor Recreation Participation Study: 2021, 23rd Edition. Boulder, Colorado, 2021.

The table below details the percentage of Americans over six years of age that participate in outdoor recreation activities most closely linked to the activities and focus of the future Clinch River State Park. Participation rates are reported for all Americans aged six years and older.⁵ Note the activities and percentage participation rates highlighted in yellow as these are the activities that experienced the greatest increase in participation as a percentage of the total population from 2018-2020. These activities and their percent growth in participation were Day Hiking (+3.1%), Camping (+1.9%), and General Fishing (+1.6%).

Activity	2018		2019		2020	
	#(000's)	%	#(000's)	%	#(000's)	%
Backpacking overnight	10,540	3.5%	10,660	3.5%	10,746	3.5%
Bicycling (mountain)	8,690	2.9%	8,622	2.8%	8,998	3.0%
Birdwatching	12,344	4.1%	12,817	4.2%	15,228	5.0%
Camping (Car, Backyard, Backpacking, RV)	41,674	13.9%	41,757	13.8%	47,935	15.8%
Canoeing	9,129	3.0%	8,995	3.0%	9,595	3.2%
Fishing (Fly)	6,939	2.3%	7,014	2.3%	7,753	2.6%
Fishing (Fly, Salt, Fresh)	49,423	16.4%	50,165	16.6%	54,744	18.0%
Fishing (Freshwater, Other)	38,998	13.0%	39,185	12.9%	42,556	14.0%
Hiking (Day)	47,860	15.9%	49,697	16.4%	57,808	19.0%
Kayak Fishing	2,535	0.8%	2,748	0.9%	3,016	1.0%
Kayaking (Recreational)	11,017	3.7%	11,382	3.8%	13,002	4.3%
Rafting	3,404	1.1%	3,438	1.1%	3,474	1.1%
Trail Running	10,010	3.3%	10,997	3.6%	11,854	3.9%
Wildlife Viewing	20,556	6.8%	20,040	6.6%	21,038	6.9%

⁵ Outdoor Industry Foundation. Outdoor Recreation Participation Study: 2021, 23rd Edition. Boulder, Colorado, 2021.

SERVICE PROVIDER ANALYSIS

A key component of the Market Analysis and Business Plan is conducting a Service Provider Analysis of facilities and services in the near vicinity of Clinch River State Park. The purpose of this analysis is to identify direct and indirect similar service providers related to the potential amenities and services that can be developed at the state park that can support visitation to the park, as well as the park supporting usage of the facilities and services of these regional providers. This assessment targeted notable parks, private providers, and sites that feature notable day-use and overnight facilities with similar offerings as those identified in the visioning process for the state park.

IMPROVED OVERNIGHT STAYS – CABINS AND LODGES

There are several privately operated cabins and lodges within the vicinity of the multiple units that will make up Clinch River State Park once fully developed. An evaluation of these facilities was conducted for all providers within 50 miles of a Clinch River State Park unit. Those facilities, as well as basic descriptions are provided in the table below and following page based on geography. There are a total of 13 improved overnight stay facilities within the region of the park.

Site / Facility	Address	Phone	Notes
Near St. Paul / Castlewood, VA			
Mountain View Lodge	16602 Wise Street St. Paul, VA 24283	276-395-0546	Suites and studios; Nine (9) rooms
Beef Holler Lodge	Castlewood, VA 24224	727-863-6091	2-bedroom cabin; pond, trails and cave to explore
West: Big Stone Gap / Duffield / Keokee / Dryden			
Appalachian Mountain Cabins	126 Appalachian Drive Duffield, VA 24244	877-299-8123	Four cabins sleeping 4-8 people
Natural Tunnel State Park	1420 Natural Tunnel Pkwy Duffield, VA 24244	276-940-2674	14 cabins sleeping 6-8 people; 6- bedroom lodge, Lodge that sleeps 48, and 4 yurts
Southwest Virginia Museum Historical State Park	10 W 1 st Street N Big Stone Gap, VA 24219	276-523-1322	Single cottage sleeps 8 people
Northwest: Norton / Wise / Coeburn / Pound / Jenkins (KY)			
Black Bear Cabin Rentals, LLC	211 Scarlett Lane Neon, KY 41840	606-634-2372	2-bedroom cabin
North: Grundy / Elkhorn City (KY) / Clintwood / Haysi			
Knotty Poplar Cabins	1211 Woods Fork Road Grundy, VA 24614	423-534-7204	8-person and 10- person cabin
Southern Gap Outdoor Adventure	1124 Shipping Sparrow Road Grundy, VA 24614	276-244-1111	Five cabins sleeping 7-10 people
Breaks Interstate Park	627 Commission Circle Breaks, VA 24607	276-865-4413	9 cabins, 70-room lodge, 1 yurt

Clinch River State Park
Market Analysis and Business Plan

Site / Facility	Address	Phone	Notes
East: Abingdon / Damascus / Glade Spring / Chilhowie / Saltville			
Damascus Cabins Sales and Rentals	127 E. Imboden Street Damascus, VA 24236	276-492-1041	Five cabins sleeping 2-5 people
Creeper Trail Cottages	553 Adkins Street Damascus, VA 24236	276-451-8342	Five cabins sleeping 2-6 people
River Trail Cabins	726 N Beaver Dam Ave Damascus, VA 24236	276-628-8123	Three cabins sleeping 2-4 people
Laurel Run Cabins	22405 Jeb Stuart Hwy Damascus, VA 24236	336-362-1372	Three cabins sleeping 2-4 people
Raven Ridge Lodge	21704 Raven Ridge Saltville, VA 24370	276-889-1299	Single lodge sleeping 6 people
South: Gate City / Weber City / Kingsport (TN) / Bristol (VA/TN) / Church Hill (TN)			
Boone's Pointe Cabins	VA-224 Gate City, VA 24251	276-494-1077	Unclear number of cabins sleeping 2-4 people
Butterfly Blessing Chalets and Cabin Rentals	712 E Main Blvd Church Hill, TN 37642	423-357-8109	Information not available

Aside from the large number of cabins and lodging available at Natural Tunnel State Park and Breaks Interstate Park, these facilities range from highly professional operations with multiple cabins or rooms available for rent to a small number of facilities that have little or no information available about the facilities and those that can only be rented through third-party rental aggregation sites (AirBnB, Bookings.com, etc.). The largest of the private facilities is Damascus Cabins Sales and Rentals and Creeper Trail Cottages both located east of the state park and with five individual cabins each. Additionally, Mountain View Lodge in St. Paul which is closest to the Sugar Hill Unit of the state park has nine rooms available for overnight stay. There are only two public parks (state, county or local) within 50 miles of Clinch River State Park that feature improved overnight accommodations, and both are west of the park.

CAMPGROUNDS

There are far more campgrounds within 50 miles of Clinch River State Park than improved overnight accommodations, with the vast majority being private campgrounds. Those facilities, as well as basic descriptions are provided in the table below and following pages based on geography. There are a total of 36 campground facilities within the relative proximate region of the park.

Site / Facility	Address	Phone	Notes
Near St. Paul / Castlewood, VA			
Maggie Way Campground	3418 Hidden Acres Road St. Paul, VA 24283	276-762-4597	25 RV hook-up sites, bathhouse and fish pond
Ridge Runner Campground	4111 Russell Creek Road St. Paul, VA 24283	276-455-0550	28 RV hook-up sites
West: Big Stone Gap / Duffield / Keokee / Dryden			
Squatchy Adventures	1750 Clinch River Hwy Duffield, VA 24244	276-202-6074	4 RV hook-up sites and 4 tent sites
Clinch River Life	15264 US-23 N Duffield, VA 24244	276-690-9199	5 tent and RV sites

Site / Facility	Address	Phone	Notes
West: Big Stone Gap / Duffield / Keokee / Dryden (continued)			
Clinch River Family Campground	7237 Anglers Way Road Duffield, VA 24244	877-254-6247	27 RV Hook-up sites, and 20 electric/water sites
Cave Springs Campground / Recreation Area (NFS)	State Road 845 Dryden, VA 24243	276-546-4297	21 electric hook-up sites and 20 tent sites
Natural Tunnel State Park	1420 Natural Tunnel Pkwy Duffield, VA 24244	276-940-2674	34 electric/water sites and primitive camping
Northwest: Norton / Wise / Coeburn / Pound / Jenkins (KY)			
Flag Rock Recreation Area	Route 619/Flag Rock Rd Norton, VA 24273	276-679-0754	18 electric/water sites
Flatwood Campground (NFS)	1700 Park Ave SW Norton, VA 24273	276-679-8370	Primitive sites only
Lonesome Pine RV Park	11414 Norton-Coeburn Road Coeburn, VA 24230	276-393-4437	24 RV sites
Bark Camp Recreation Area (NFS)	1700 Park Ave SW Norton, VA 24273	276-679-8370	Primitive sites only
Cane Patch Campground (NFS)	1700 Park Ave SW Norton, VA 24273	276-679-8370	Primitive sites only
High Knob Recreation Area (NFS)	1700 Park Ave SW Norton, VA 24273	276-679-8370	Primitive sites only
Laurel Fork Campground	1700 Park Ave SW Norton, VA 24273	276-679-8370	Primitive sites only
North: Grundy / Elkhorn City (KY) / Clintwood / Haysi			
Southern Gap Outdoor Adventure	1124 Shipping Sparrow Road Grundy, VA 24614	276-244-1111	19 RV hook-up sites and primitive camping area
Mountain Top Campground	100 Kiwanis Park Road Haysi, VA 24256	276-218-0271	18 RV hook-up sites and 18 primitive tent sites
Thunder River Campground	1558 Spashdam Road Haysi, VA 24256	276-701-9876	10 RV hook-up sites and 10 primitive tent sites
Cranesnest Campground	192 White Water Road Haysi, VA 24256	276-835—9544	20 primitive sites
Lower Twin Campground	192 White Water Road Haysi, VA 24256	276-835—9544	25 primitive sites
Pound River Campground	1182 Pound River Campground Road Clintwood, VA 24228	276-835-9544	22 primitive sites
Breaks Interstate Park	627 Commission Circle Breaks, VA 24607	276-865-4413	138 RV hook-up / tent sites
Northeast: Cleveland / Lebanon / Honaker / Richlands, Raven / Claypool Hill			
Cleveland Riverbend Campground	6654 Cleveland Road Cleveland, VA 24225	276-889-4365	Five RV sites and primitive tent area

Site / Facility	Address	Phone	Notes
East: Abingdon / Damascus / Glade Spring / Chilhowie / Saltville			
Wolf Lair Campground	19091 County Park Road Abingdon, VA 24211	276-739-8004	56 RV hook-up sites and safari tent
Lakeshore Campgrounds	19417 County Park Road Abingdon, VA 24211	276-628-5394	200 RV and tent sites
Callebs Cove Campground	25136 Whitaker Hollow Road Abingdon, VA 24211	276-475-5222	Multiple RV sites
Damascus Creekside RV Park	111 S Railroad Ave Damascus, VA 24236	276-475-5276	Multiple RV sites
Laurel Creek RV Park	812 Orchard Hill Road Damascus, VA 24236	276-477-3656	21 RV hook-up sites
Brumley Cove Baptist Camp	21530 Brumley Gap Road Abingdon, VA 24210	276-944-4673	Information not available
Riverside Campground	18496 N Fork River Road Abingdon, VA 24210	276-623-0340	94 RV hook-up sites and 20 electric/water tent sites
Rainbow Campground	4372 Tumbling Creek Rd Saltville, VA 24370	276-944-4243	Multiple RV hook-up sites and electric/water tent sites
South: Gate City / Weber City / Kingsport (TN) / Bristol (VA/TN) / Church Hill (TN)			
Suga Hollow Park	23261 Sugar Hollow Road Bristol, VA 24202	276-645-7275	75 campsites
Cochran's Lakeview Campground	821 Painter Creek Road Bristol, TN 37620	423-878-8045	Information not available
Peace Lakeview Campground	846 TN-44 Bristol, TN 37620	423-534-5716	Information not available
Observation Knob Park	553 Knob Park Road Bristol, TN 37620	423-878-1881	Multiple RV hook-up sites
Backbone Rock Campground (NFS)	10585 TN-133 Shady Valley, TN 37688		10 primitive tent sites
Warrior's Path State Park	490 Hemlock Road Kingsport, TN 37663	423-239-8531	94 RV hook-up / tent sites

The vast majority of the campgrounds located within 50 miles of Clinch River State Park are privately-owned and operated, with six predominantly primitive campgrounds operated by the National Forest Service (NFS), and three state parks with more developed campgrounds. The private campgrounds range from large, highly professional operations to more simple operations with limited infrastructure and information available. Several campgrounds feature day-use amenities such as pavilions, bath houses, natural water access (river, lake or pond), and multi-use open areas. Campgrounds located within NFS lands or state parks also feature extensive trail and other outdoor recreation opportunities on-site, however NFS campgrounds are primitive and offer no water or electric utilities.

OUTFITTERS

In several regions within 50 miles of the Clinch River State Park sites there are outfitter operators that provide a variety of equipment provision and guided services. These primarily include guided and unguided ATV experiences, mountain biking, canoeing, kayaking and fishing. Those service providers, as well as basic descriptions are provided in the table below and following pages based on geography. There are a total of nine (9) known outfitters operating within 50 miles of the state park.

Outfitter	Address	Phone	Notes
Near St. Paul / Castlewood, VA			
Clinch Life Outfitters	3022 5 th Avenue St. Paul, VA 24283	276-608-6907	Kayak rentals, guided kayaking, guided fishing
Clinch River Adventures	16642 E. Riverside Drive St. Paul, VA 24283	276-275-4154	Tube and kayak rental, shuttle service
Esembee Adventure Company	3051 4 th Avenue St. Paul, VA 24283	276-455-0550	ATV, kayak, tube, mountain bike, and fishing gear rentals; shuttle service
West: Big Stone Gap / Duffield / Keokee / Dryden			
Squatchy Adventures	1750 Clinch River Hwy Duffield, VA 24244	276-202-6074	Kayak and tube rentals
Clinch River Life	15264 US-23 N Duffield, VA 24244	276-690-9199	Tube rentals and shuttle service
Iron Works Cycling and Outdoor Adventure	520 Wood Avenue E Big Stone Gap, VA 24219	276-207-8232	Mountain bike and kayak sales and repair services
Northwest: Norton / Wise / Coeburn / Pound / Jenkins (KY)			
Pathfinder Outdoor Adventures and High Knob Outfitters	534 Park Ave Norton, VA 24273	276-219-4001 276-219-4002	Kayak, standup paddle board, and canoe rentals
Northeast: Cleveland / Lebanon / Honaker / Richlands, Raven / Claypool Hill			
OAC Outfitters	Pounding Mill, VA	276-971-3038	Tour and booking agency
East: Abingdon / Damascus / Glade Spring / Chilhowie / Saltville			
Adventure Damascus Bike Rental and Shuttle Company	331 Douglas Drive Damascus, VA 24236	276-475-6262	Mountain bike rental and shuttle service

While there are fewer campgrounds and improved overnight accommodations in the immediate vicinity of the Sugar Hill tract of Clinch River State Park near St. Paul, Virginia, some of the more established outfitters supporting recreation on the river through both fishing and kayaking that also provide shuttle service are located in this area. The only other region with a concentration of more well established outfitters is west of the park near the community of Duffield, Virginia.

SERVICE PROVIDER ANALYSIS CONCLUSIONS

Based on a summary of the service provider analysis, there are several conclusions that are relevant for this Market Analysis and Business Plan for Clinch River State Park. This assessment identified that among the amenities and visitor experiences considered for the study site to meet the desired goals and objectives for DCR, improved overnight accommodations, RV and tent camping, with a select set of day-use amenities to enrich the overnight visitor experience as well as activate the site for day-use opportunities is the primary recommendation. The service provider analysis revealed a few key points:

- While there are a multitude of improved overnight accommodations within 50 miles of the Clinch River State Park sites, the majority of those are west, north and east of the park with the largest facilities being Natural Tunnel State Park (36 miles from St. Paul) and Breaks Interstate Park (45 miles from St. Paul). There are very few improved accommodations in the near vicinity of the Sugar Hill tract of the state park, which is where the likely potential of these amenities would be located.
- Similar to improved overnight accommodations, the presence of existing campgrounds is strong within 50 miles of the state park but not in the immediate vicinity of the Sugar Hill tract. There are two existing campgrounds in that area that are well established and primarily cater to RV campers. There could be other campground opportunities to consider at Clinch River State Park sites depending on the presence of other providers and the level of service being evaluated for the state park experience (primitive vs. improved camping).
- There are several outfitters operating with 50 miles of Clinch River State Park and some of the most established services are present in the near vicinity of St. Paul and the Sugar Hill tract. This favors potential day-use activation, as well as value-added visitor experiences for overnight guests at the state park unit located there.

CONCLUSION 1: There is moderate-strong market potential for improved overnight accommodations at the Sugar Hill tract of Clinch River State Park.

CONCLUSION 2: There is moderate-strong market potential for an improved campground that supports RVs and tent campers at the Sugar Hill tract, as well as potentially limited camping at other sites of Clinch River State Park.

CONCLUSION 3: Existing outfitters and guide services are well positioned in several regions with 50 miles of Clinch River State Park to offer supported experiences for both day-use and overnight visitors to the park.

VISITATION AND USAGE PROJECTIONS

The process to develop visitation and usage projections for Clinch River State Park requires the view of the individual units of the park (ie. Artrip Bent and Sugar Hill) operating in tandem with one another. It is extremely difficult at this planning stage to definitively estimate the market draw of individual units. It is most likely that the connectivity between the sites and existing access points along the Clinch River is what creates the largest appeal for most visitors.

It is expected that the Sugar Hill unit will most likely see a greater amount of day-use given the proximity to the St. Paul community and the allure of daily trail usage. The Artip unit will see incidental day-use, but its qualities and location are more likely to be used predominantly as an overnight camping or lodging location from where visitors can either just stay the night and/or stage a trip down the Clinch River. Estimated local day-use of both sites will impact design of desired parking capacity but are not as relevant in developing defensible recommendations on properly sizing campgrounds and overnight accommodations. The projections included in this analysis take into account potential local day-use but are more aligned to the larger market characteristics of the primary and secondary service markets as identified in the preceding market analysis.

POTENTIAL VISITATION PROJECTIONS

Visitation projections for the experiences possible at Clinch River State Park were derived from a multi-step process that has proven to be reliable in numerous previous studies conducted for similar projects. This process involves the components described below.

1. Identification of user market size and characteristics
2. Identification of relevant outdoor recreation participation trends
3. Application of participation trend data to user markets + tourism data
4. Estimation of market capture rate

The details within each of these components are provided in the sections that follow.

USER MARKET SIZE AND CHARACTERISTICS

The user market of the project will predominantly serve two areas – the primary service market (two-hour drive time) and the secondary service market which is comprised of residents from within a two-hour to five-hour drive. Additionally, existing tourism in the region is expected to significantly contribute to usage of the sites and services of the park. There will be potentially significant incidental traffic to the sites from residents and visitors to the area that are outside of both of these user markets, but for the sake of prudence and reliable market planning these user markets are considered to be the source of at least 75% of the site's potential visitors.

All market characteristics are taken into account when developing usage projections, but the following characteristics have the heaviest influence on determining market capture rates:

- **Primary Service Market (Two-hour drive time)**
 - 1,352,563 residents
 - Largest age segment = 55-74 years
 - Largest household income segment = \$50-75K annually
- **Secondary Service Market (Two-hour to five-hour drive time)**
 - 22,413,473 residents
 - Largest age segment = 55-74 years
 - Largest household income segment = \$50-75K annually

USING MARKET DATA TO PROJECT USAGE

Relevant outdoor recreation participation trends that were analyzed for the Clinch River State Park developments were overall participation in outdoor recreation activities, and participation in multiple related outdoor recreation categories – general users, recreational canoeing/kayaking, whitewater canoeing/kayaking, and camping. These participation rates will help to develop a core, or base, of participants of the programs, services, and experiences of the park. Incidental traffic from tourists or out-of-market visitors will likely be captured in the overall participation rate in outdoor recreation. The following participation rates are the heaviest influence on determining user market size:

- Outdoor recreation participation (overall) = 53%
- Non-whitewater paddling participation = 4.3%
- Whitewater paddling participation = 0.9%
- Camping = 15.8%

APPLYING PARTICIPATION TRENDS TO USER MARKETS

For the purpose of these usage projections and operational models, the classifications of potential users discussed below are aligned with participation trends. These user classifications have been developed based upon the direct experience of existing whitewater park operators and the predominate usage of those facilities.

GENERAL USER

The general user are those individuals, families, and groups that may have little or no previous experience or technical skills in paddling rivers, but are inclined to participate in the programs, services, and experiences of the river recreation and general state park services and amenities envisioned for these sites. They are likely to own all their own camping equipment or RV, and possibly own canoes or kayaks they may bring with them for a Clinch River State Park experience. Those that do not own watercraft are likely to be inclined to rent boats or hire a guide service. These are also users that could just be looking for a scenic and safe place to camp or stay the night and enjoy the parks' amenities.

The general user market will be determined based upon 53% of the population.

NON-WHITEWATER PADDLERS (INCLUDES RAFTING)

Non-whitewater paddlers are individuals, families, and groups that have recreational paddling and/or rafting experience and possible equipment of their own. These users will tend to be older adults and new entrants into paddle sports, and likely have limited experience in whitewater paddling. Non-whitewater paddlers will likely participate in equipment rentals and self-guided experiences, and more likely to participate in instructional clinics and services as they transition their skills to include whitewater sports.

The non-whitewater paddler user market will be determined based upon 4.3% of the population.

WHITEWATER PADDLERS

Whitewater paddlers are individuals, families, and groups that have previous whitewater paddling experience, mostly kayaking and canoeing, and usually have equipment of their own. These users tend to be young adults, but can include participants of all ages. These paddlers will represent the smallest user segment. Whitewater paddlers will rarely participate in guided programs and most likely have their own equipment. Since this section of the Clinch River is not considered a strong whitewater experience,

most paddlers in this category would likely access the sites to enjoy a scenic river trip well within their skill level.

The whitewater paddler user market will be determined based upon 0.9% of the population.

CAMPING

Camping has become increasingly popular in recent years with a noticeable increase in participation seen as an impact of COVID-19. The percentage of campers that own their equipment and/or RV has increased, as well as the distance individuals and families will travel to seek their camping experience.⁶ Given the remoteness of Clinch River State Park, this latter fact bodes well for participation.

The camping user market will be determined based upon 15.8% of the population.

The total user market *is not* the projected usage of the park, but rather the smaller sub-set of the total population that is most likely to participate in the park's programs, services, and experiences. Actual usage projections are based upon an estimated capture rate of users from within the user market. The tables below detail the total user market size based upon these user classifications and their corresponding participation trends.

User Market	Participation Rate	Primary Service Market	Secondary Service Market	Total User Market
General Users	53.0%	716,858	11,879,141	12,595,999
Non-whitewater Paddlers	4.3%	58,160	963,779	1,021,940
Whitewater Paddlers	0.9%	12,173	201,721	213,894
Camping	15.8%	213,705	3,541,329	3,755,034
Local Market Population		1,352,563		
Secondary Market Population		22,413,473		
Total Market Population		23,766,036		

The data presented in this table indicates that the total user market for general users is 12,599,999 persons including the primary and secondary service areas. Included within this population are approximately 716,858 persons as general users that live within the primary service area, or within a two-hour drive. Similarly, the total user market of non-whitewater paddlers appears to be 1,021,940, of which 58,160 persons are within the primary service area. The total user market of whitewater paddlers is approximately 213,894 of which 12,173 are projected to reside in the primary service area. And finally, the total potential user market of campers is 3,755,034, with approximately 213,705 residing within the primary service area.

ESTIMATING CAPTURE RATE

The capture rate of a market is the percentage of the user market that can reliably be captured to participate at least once annually in the services and experiences of Clinch River State Park. Research has shown that while there may be overall user market of 1,00,897 people within the primary service area, not all of these people will visit the sites each year. Actual capture rates are considerably lower than total market size for recreation and tourism because these are discretionary activities.

Estimating the potential capture rate of a user market is not an exact science, but is based upon previous performance of similar sites, general economic conditions, and the prevailing characteristics of the user

⁶ Wisconsin Office of Outdoor Recreation. North American Camping Report: The 2021 Topline, Madison, Wisconsin, 2022.

market population. As a general rule, the capture of a user market declines with distance from the park. In other words, while the capture rate of a market within a two-hour drive of Clinch River State Park may be as high 5%, it will likely not be any higher than a fraction of 1% among residents beyond that distance. Capture rates will also differ based upon user classifications. For example, whitewater paddlers tend to demonstrate higher degrees of dedication to their activity than general users. Therefore, the capture rate of these users will be higher than that of general users. The table below details the estimated capture rates for each of the user classifications in each of the service areas. Again, these are based on industry experiences of other similar projects in the United States.

Given the remoteness of Clinch River State Park, market capture rates have been further reduced in this projection from that of sites located closer to population centers because of the lack of convenience for most people within a two and five-hour drive time to access the park. Camping and overnight stay accommodations and occupancy rates of similar state parks in the region have been taken into account when estimating the capture rates for Clinch River State Park. Additionally, data was obtained from the St. Paul Tourism Office indicating only 14,000 – 15,000 current annual visitors to the area.

Because Clinch River State Park is a new site in a fairly remote location, projections were developed with a range of potential visitation. This is based on a conservative approach to market capture rates, and a more aggressive approach. These differing capture rates are detailed in the tables below.

CONSERVATIVE CAPTURE RATE

User Market	Primary Service Market Capture Rate	Secondary Service Market Capture Rate
General Users	0.20%	0.09%
Non-whitewater Paddlers	5.00%	0.50%
Whitewater Paddlers	5.00%	0.50%
Camping	0.20%	0.08%

AGGRESSIVE CAPTURE RATE

User Market	Primary Service Market Capture Rate	Secondary Service Market Capture Rate
General Users	0.80%	0.10%
Non-whitewater Paddlers	7.00%	0.50%
Whitewater Paddlers	7.00%	0.50%
Camping	0.70%	0.10%

DEVELOPING VISITATION PROJECTIONS

The final step for determining reliable visitation projections is to apply the estimated capture rates for each classification of user to the service market in each service area. The tables that follow detail the specific data this process yields in both the conservative and aggressive capture rate scenarios. These usage projections are intentionally calculated as conservative estimates for visitation and participation at the river recreation sites and services once fully operating. They have followed the following process:

- 1. Total Market Size x Participation Rate = Total User Market**
- 2. Total User Market x Estimated Capture Rate = Total Market Capture, or Total Potential Market**
- 3. Total Potential Market x Adjusted Estimated Capture Rate = Usage Projection**

CONSERVATIVE VISITATION PROJECTIONS

User Market	Primary Service Market Capture Rate	Primary Service Market Capture	Secondary Service Market Capture Rate	Secondary Service Market Capture
General Users	0.20%	1,434	0.09%	10,691
Non-whitewater Paddlers	5.00%	2,908	0.50%	4,819
Whitewater Paddlers	5.00%	609	0.50%	1,009
Camping	0.20%	427	0.08%	2,833

User Market	Total Market Capture
General Users	12,125
Non-whitewater Paddlers	7,727
Whitewater Paddlers	1,617
Camping	3,260
TOTAL	24,730

AGGRESSIVE VISITATION PROJECTIONS

User Market	Primary Service Market Capture Rate	Primary Service Market Capture	Secondary Service Market Capture Rate	Secondary Service Market Capture
General Users	0.80%	5,735	0.10%	11,879
Non-whitewater Paddlers	7.00%	4,071	0.70%	6,746
Whitewater Paddlers	7.00%	852	0.70%	1,412
Camping	0.70%	1,496	0.10%	3,541

User Market	Total Market Capture
General Users	17,614
Non-whitewater Paddlers	10,818
Whitewater Paddlers	2,264
Camping	5,037
TOTAL	35,733

***IMPORTANT NOTE:** These visitation projections do not fully capture the potential local day-use of Clinch River State Park, as that demand is largely incalculable and unknown at this point in the planning process.*

As noted in these tables and this exercise, the total potential usage of Clinch River State Park sites and services by the recreational market is approximately 25,000 – 35,000 annual visitors. The total potential visitation is comprised of 12,000 – 18,000 general use visitors, 8,000 – 11,000 non-whitewater paddlers, 2,000 whitewater paddling enthusiasts, and 3,000 – 5,000 campers all of which would likely drive the operational and financial success of the sites.

TOTAL POTENTIAL VISITATION PROJECTION

The combined projections from the combined service markets equate to the likelihood that the total potential user-ship of Clinch River State Park sites and services could be 24,730 – 35,733 visitors each year. While this represents the total potential usage, the pro forma developed within this report does not assume this level of usage in the initial years of operation. Rather, the pro forma was developed to identify the minimal annual usage required to support a financially “break-even or better” operational model.

From these findings, the following recommendations are reflected in the operational models developed for Clinch River State Park:

1. Design of amenities and services should have a broad appeal to people with skilled expertise in specific paddling sports, as well as low-barrier of entry activities for general users.
2. Operations should be limited and low-maintenance in order to be flexible and cost efficient.
3. The core business of Clinch River State Park sites and services will most likely be from general users, non-whitewater paddler, and campers that elect to stay overnight either camping or in improved accommodations that support their stay and desired experience.
4. Ancillary revenue streams are advisable to support operations costs. These include but are not limited to special events, festivals, and concession operations.



DESIGN RECOMMENDATIONS

This *Market Analysis and Business Plan* includes design recommendations for the Artrip Bent and Sugar Hill units of Clinch River State Park that are based on a series of factors:

- Potential visitation projections
- Current regional tourism
- Visitation and overnight accommodations at nearby state parks in the region
- Visitation and overnight accommodations at similar state parks in the region

These design recommendations are predominantly focused on overnight stay capacity at the combined Clinch River State Park units. Parking and comfort station / restroom facilities should be determined based on the combined need of overnight accommodations and allowable day-use to also protect the impact on natural resources. Trail development should be based on site suitability and available space.

OVERALL VISITATION

Based on typical visitation patterns of state parks in the area and of similar characteristics, the table below depicts how the estimated annual visitation at both the conservative and aggressive levels would likely materialize on a monthly basis.

	Percent of Annual Visitation	Annual Visitation 24,730	Annual Visitation 31,995
January	1%	247	320
February	3%	742	960
March	8%	1,978	2,560
April	10%	2,473	3,200
May	12%	2,968	3,839
June	14%	3,462	4,479
July	14%	3,462	4,479
August	12%	2,968	3,839
September	8%	1,978	2,560
October	10%	2,473	3,200
November	6%	1,484	1,920
December	2%	495	640
TOTAL	100%	24,730	31,995

CAMPGROUND RECOMMENDATIONS

When developing design recommendations for campgrounds at Clinch River State Park, strong consideration was given to current (2021) visitation and usage data at campgrounds at state parks both located within a 60-minute drive time and those located within a four-hour drive time that matched the characteristics of the park. This analysis was focused on two state parks in particular – Warriors Path State Park (TN) located within a 60-minute drive time of the site, and Hiwassee River State Park (TN) that is within a four-hour drive time of Clinch River State Park and shares many characteristics of the project sites. Warriors Path State Park, while close in proximity, is a very different setting in that this is a park located directly within an urban area (Kingsport, TN) with a tremendous amount of day-use attributed to the amenities of the park that include a golf course. Hiwassee River State Park is more closely aligned with the type of park and user experiences that are more relevant for Clinch River State Park.

The usage projections utilized in this analysis for design recommendations are aligned with the overall visitation projections of Clinch River State Park and existing tourism data detailed within this report. The

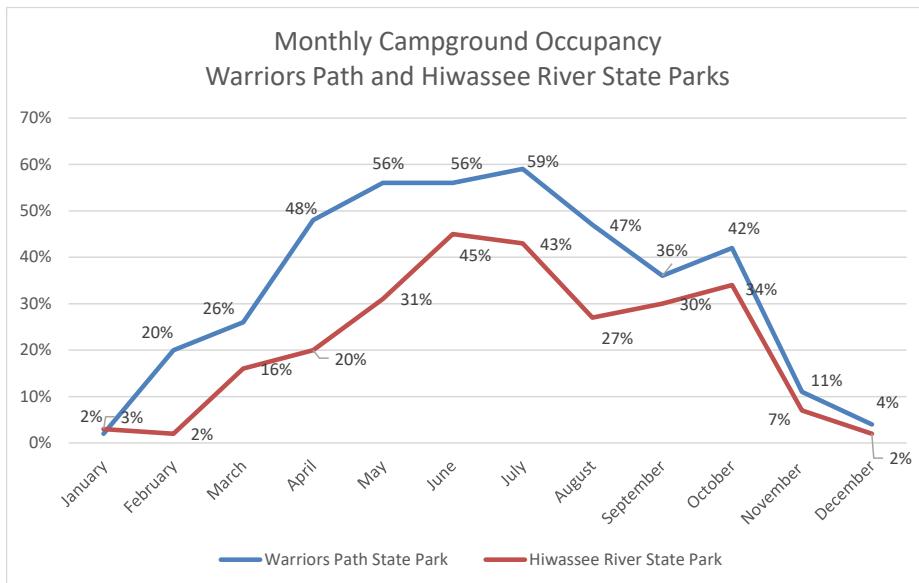
Clinch River State Park
Market Analysis and Business Plan

chart below depicts comparisons of annual occupancy rates, subsequent annual campsite usage, and a varied set of campground capacity options for the combined development of the Artrip Bent and Sugar Hill units. Based on this analysis, it is recommended that the first phase of development at Clinch River State Park sites of campsites be a total of **50-60** in number. This should include an appropriate mix of walk-in sites, car-camping tent sites, and sites that can accommodate RVs.

Annual Usage	Warriors Path State Park		Hiwassee River State Park		Monthly Campground Occupancy	Clinch River State Park				
	Monthly Campground Occupancy	Monthly Campground Use	Monthly Campground Occupancy	Monthly Campground Use		40	50	60	70	90
January	2%	79	3%	42	1%	12	16	19	22	28
February	20%	161	2%	21	2%	22	31	37	43	56
March	26%	739	16%	227	16%	198	248	298	347	446
April	48%	1,352	20%	278	24%	288	372	446	521	670
May	56%	1,787	31%	454	31%	384	481	577	673	865
June	56%	2,220	45%	636	45%	540	698	837	977	1,256
July	59%	2,936	43%	630	45%	558	698	837	977	1,256
August	47%	1,899	27%	392	27%	335	419	502	586	753
September	36%	1,415	30%	426	30%	360	465	558	651	837
October	42%	1,713	34%	498	35%	434	543	651	760	977
November	11%	452	7%	96	7%	84	109	130	152	195
December	4%	153	2%	22	2%	25	31	37	43	56
Annual Campsites Sold	14,906		3,722			3,281	4,158	4,989	5,821	7,484
Avg Annual Occupancy	34%		22%			22%	23%	23%	23%	23%

This analysis assumes that the reasonable annual occupancy rate of the campgrounds at Clinch River State Park are approximately 23%, with capacity to accommodate monthly occupancy rates up to 45% or higher during peak seasons and potentially large event periods.

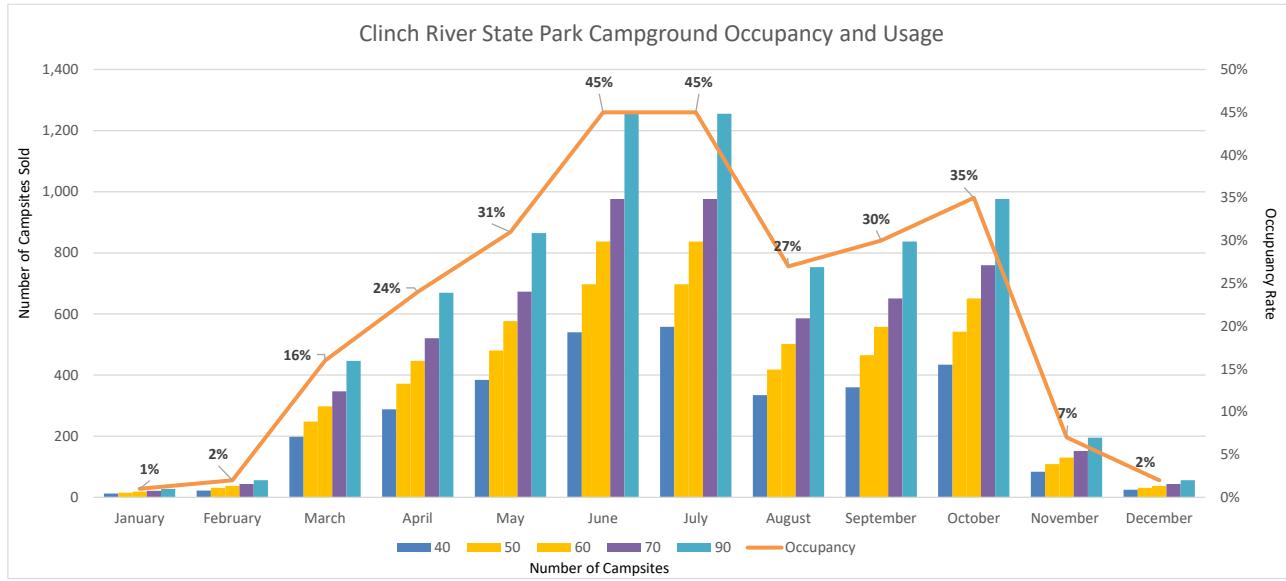
The following graphs depict occupancy and usage rates at Warriors Path and Hiwassee River State Parks in 2021.



As additional support for the potential campground and cabin usage, monthly campground cabin attendance was also obtained for Hungry Mother State Park and Natural Tunnel State Park, both located in the same region of Virginia as Clinch River State Park. Hungry Mother State Park is located approximately 63 miles from the Sugar Hill Unit and Natural Tunnel State Park is approximately 53 miles away. These monthly attendance figures for both parks in 2020 and 2021 is provided in the tables below.

Hungry Mother State Park													
2020	January	February	March	April	May	June	July	August	September	October	November	December	
Camp	53	53	1,393	0	3,190	9,654	10,477	9,387	5,328	6,380	2,662	409	
Cabin	563	604	1,317	0	0	2,169	3,627	3,123	2,283	2,790	2,033	534	
Total	616	657	2,710	0	3,190	11,823	14,104	12,510	7,611	9,170	4,695	943	
2021	January	February	March	April	May	June	July	August	September	October	November	December	
Camp	307	155	3,844	7,019	2,363	10,059	12,583	8,464	9,485	8,430	3,967	845	
Cabin	397	379	2,476	2,708	664	3,388	5,055	3,715	3,559	3,453	3,049	1,081	
Total	704	534	6,320	9,727	3,027	13,447	17,638	12,179	13,044	11,883	7,016	1,926	
												Total Overnight	
												Avg per Month	
												2020	
												60,829	
												2021	
												97,445	
												2020	
												5,669	
												2021	
												8,120	
Natural Tunnel State Park													
2020	January	February	March	April	May	June	July	August	September	October	November	December	
Camp	0	0	464	0	1,524	4,235	4,894	4,373	3,790	3,722	1,287	378	
Cabin	413	290	276	0	0	549	910	1,466	1,076	2,503	1,164	534	
Total	413	290	740	0	1,524	4,784	5,804	5,839	4,866	6,225	2,451	912	
2021	January	February	March	April	May	June	July	August	September	October	November	December	
Camp	0	0	1,155	2,501	2,765	3,138	3,280	3,254	3,845	3,379	1,135	59	
Cabin	643	466	1,074	927	851	1,043	1,421	1,474	1,359	1,437	749	890	
Total	643	466	2,229	3,428	3,616	4,181	4,701	4,728	5,204	4,816	1,884	949	
												Total Overnight	
												Avg per Month	
												2020	
												33,848	
												2021	
												36,845	
												2021	
												3,070	

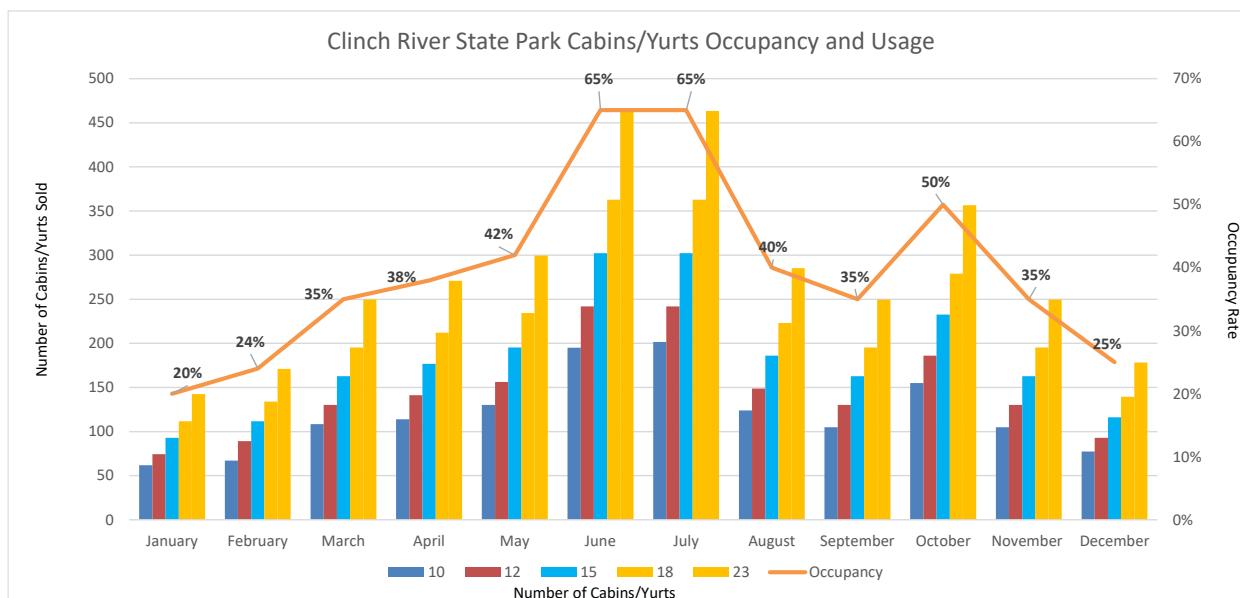
The subsequent recommended design capacity for campgrounds at Clinch River State Park at the varying levels of development are detailed in the graph below. Note the recommended 50-60 site scenarios are depicted in orange in the graph below.



CABINS / YURTS RECOMMENDATIONS

Similar to campground usage data taken from nearby and similar state parks particularly in Tennessee, design recommendations were developed for cabins and yurt facilities for Clinch River State Park. These recommendations are based on projected overall visitation, unique market characteristics, and the overall average annual occupancy rate of similar improved accommodations in Tennessee State Parks of 46%. This analysis suggests that the initial optimal amount of cabins and yurts would operate at just above 40% occupancy and should be developed at the combined units of Clinch River State Park to be **18-23 units**. This is detailed in the table and graph that follows with the recommended level of cabin/yurt development depicted in orange in the capacity comparison graph.

Annual Usage	Monthly Occupancy	Clinch River State Park				
		10	12	15	18	23
January	20%	62	74	93	112	143
February	24%	67	89	112	134	171
March	35%	109	130	163	195	250
April	38%	114	141	177	212	271
May	42%	130	156	195	234	299
June	65%	195	242	302	363	463
July	65%	202	242	302	363	463
August	40%	124	149	186	223	285
September	35%	105	130	163	195	250
October	50%	155	186	233	279	357
November	35%	105	130	163	195	250
December	25%	78	93	116	140	178
Annual User Nights Sold		1,455	1,775	2,219	2,663	3,403
Avg Annual Occupancy		41%	40%	41%	41%	41%



BUSINESS PLAN

This Business Plan portion of this report contains three major elements for the purposes of informing operational and management planning of Clinch River State Park. These include:

1. Operational Standards
2. Program and Management Strategy
3. Pricing Strategy and Financial Pro Forma

OPERATIONAL STANDARDS

The operational standards outlined within this plan are derived from state park management best practices within DCR and among peer state park agencies around the United States. The first aspect of these operational standards is the recommended operational model.

RECOMMENDED OPERATIONAL MODEL

The recommended operational model of Clinch River State Park is a **managed access / staffed model**. This means the sites have controlled entry through either a manned or automated admission point and feature a basic staffing model to support user safety, site / amenity management, and the visitor experience. The Sugar Hill unit will have access from the Clinch River itself that will be more challenging to enforce but should be regularly monitored to ensure any visitors accessing the park from the river are adhering to park policies and facility usage regulations.

It is recommended that there be staffing located at both the Artrip Bent and Sugar Hill units to oversee the sites, manage operations and maintenance, and support visitor safety and experiences. These staff resources can be augmented by a volunteer program that includes work campers or park hosts to assist in providing basic park and campground maintenance and visitor engagement / support. It is also recommended to consider the engagement of qualified concessionaires to provide guided experiences on the Clinch River that can utilize the state park sites as staging locations, or as launch or take-out sites for river experiences.

Guiding Principles:

1. The operations and management of Clinch River State Park should be managed with the following primary purposes:
 - a. Stewardship of the natural, historic and cultural resources of the sites
 - b. Safe visitor experiences for both day-uses, as well as multi-day and overnight experiences
 - c. Provide access to nature and outdoor recreation opportunities
 - d. Support and enhance quality of life for local communities and residents by providing protected open and green spaces, access to nature, and public recreation opportunities
 - e. Support and enhance local economic development through the attraction of visitors from outside the area
2. The core business of Clinch River State Park will be from parking and facility usage fees collected from visitors. Fee-based facility will include but not be limited to picnic shelters, campsites, cabins, yurts, and the future lodge at the Sugar Hill unit once developed.
3. Ancillary revenues can be generated from equipment rental, concessionaire fees from river operators, and limited retail / park store that can be support at the Sugar Hill unit.

PROGRAMS AND SERVICES MANAGEMENT

Programs and services should be developed and managed within a classification system of intended purpose and what benefits they provide. Funding source expectations can then be assigned and this data used in future cost analyses. The results of this process is a summary of definitions and criteria, classification of programs and services within the park, and recommended cost recovery targets for each service based on these assumptions. The classification of services protocol identifies:

- the most important park operations and processes
- the support functions performed
- the value-added programs that enrich both the visitor's experience and generate earned revenues in mission-aligned ways to help support operating costs

It is imperative to classify the services based on the users' perspective. Who is benefiting from consuming the service? Although some services may seem "core" to a park, they may really be an important service. For example, camping is a service that benefits the people camping, not the general public. Although it generates money and is considered a high priority service, it does not mean it translates into a "core" service.

Specific details on recommended classification of programs and services are provided in subsequent sections of this plan.

PRICING OF SERVICES

All services should be evaluated yearly for their performance and relevancy to the operational and management objectives of the park. It times it may be advisable for services to be reduced, eliminated, or transferred. Classifying programs and services is an important process for a park to follow in order to remain aligned with the visitor's interests and needs, the park's mission, and to sustainably operate within the bounds of the financial resources that support it. It is a best practice is providing public programs that they be regularly evaluated on the criteria of type, who benefits from it, and who bears the cost of the program.

The approach taken in this analysis expands classifying services in the following ways:

- For whom the program is targeted
- For what purpose
- For what benefits
- For what cost
- For what outcome

PERFORMANCE MEASURES

Site standards have been developed and are recommended to support the core amenities and services of Clinch River State Park. The standards focus on establishing what constitutes a quality experience, pricing and cost, marketing and communication standards for users to access the amenity or service, and performance measures to track desired outcomes of the park and that hold staff accountable to those standards.

Clinch River State Park should consider developing the following performance measures to track desired outcomes and to demonstrate to key leadership the value of the investment being made in its programs, services, and amenities.

- During peak season, camp sites and overnight accommodations will have the following utilization targets (per month):
 - Campsites with electricity: 55%
 - Campsites without electricity: 55%
 - Cabins: 65%
 - Yurts: 65%
- During off-peak season, camp sites and overnight accommodations will have the following utilization targets (per month):
 - Campsites with electricity: 35%
 - Campsites without electricity (reduced availability): 35%
 - Cabins: 40%
 - Tipi: 40%
- All special events will generate at least 100% cost recovery for offering the service
- Reinvest 10% of all generated revenue into park operations and maintenance
- Repeat visitation will be tracked and the park goal is to have 50% repeat visitors annually (from previous year)
- Out of area visitation to Clinch River State Park will represent 70% of total visitation
- Capital improvements meet 95% of target revenues predicted
- Visitor satisfaction levels met at 90% or greater in all services
- Volunteer hours make up 15% of the total work force hours in the park

STANDARDS OF HIGH QUALITY STATE PARK EXPERIENCE

For all amenities and services, the following standards should be in place to promote a high-quality state park experience:

- All staff qualifications are consistent with in-the-field experience.
- Any guided or facilitated programs should have a staff/volunteer-to-participant ratios that is appropriate for participants to feel safe and attended to.
- Minimum and maximum numbers of participants are set for programs that will allow for a high-quality experience.
- The length of programs must commensurate with the attention capability of the participants to respond effectively in order to enjoy themselves in the activity.
- Appropriate support transportation is available to assist participants for river experiences (if necessary).
- Staff is trained in first-aid and CPR. Volunteers are trained as well when appropriate.
- Staff and volunteers are trained in customer service and diversity training to make all visitors feel welcome and appreciated.

- Customer feedback methods are in place to seek input from visitors on their expectations of park services and the results of their experience. This should include pre- and/or post-evaluations focus groups or trailer calls.
- Pricing of services is explained to participants and/or parents on the level of investment they are making in the service and the level that Clinch River State Park is investing in their experience.
- All park policies and usage regulations are available and accessible to visitors.
- New temporary and seasonal staff volunteers, and contract employees working with children will have certified background checks.
- Staff and volunteers that have regular visitor contact will be dressed in the appropriate uniform that includes a nametag.
- Performance measures tracked will be shared with staff and volunteers.
- Exit interviews will be conducted with temporary and seasonal staff before they leave each season and noted in their file as to re-hire or not.
- All regulatory requirements for programs and services are complied with.

MAINTENANCE STANDARDS

- Establish maintenance zones within Clinch River State Park that correlate with regular maintenance attention and activities performed. This should range from Level 1 areas that are highly utilized by visitors and require routine and daily maintenance, to Level 3 areas that require little to no regular maintenance beyond resource stewardship.
- Minimize Level 1 areas that require regular mowing during the growing season to optimize staff efficiency by utilizing native plantings.
- Maintain an active invasive management plan to continually improve the quality of the natural resources at Clinch River State Park.
- Utilize a maintenance management system to strategically prioritize and allocate staff resources to necessary maintenance tasks, as well as track capital asset lifecycle.
- Regularly inspect built infrastructure to identify maintenance priorities.
- Utilize volunteers where appropriate and possible to improve maintenance staff efficiency.
- Track the asset value of the park system and try to budget for 3%-5% of total asset value as an annual reinvestment in capital infrastructure.

FINANCIAL STANDARDS

- The fee schedule is in place, and staff understand the philosophy behind it and how to communicate price to users.
- Pricing of all services including concessions will be established commensurate with the prices of other available park amenities and consistent with system standards.
- The park will reserve the right to review concessionaire books as requested.

- Monthly results of programs and services will be posted and shared with staff on those services that are underperforming, meeting, or exceeding financial goals.
- Mini business plans will be developed for each core service on a yearly basis that evaluate the service based on meeting the outcomes desired for participants, cost recovery, percentage of the market and business controls, cost of service, pricing strategy for the next year given the fee schedule, and marketing strategies to be implemented. Cash collection standards and refund process standards should be incorporated. This will be the basis for budget development.
- Yearly competitor and other service providers will be benchmarked, shopped, and evaluated, for changes they are making and how they compare.
- Partnerships with service or program providers will be updated yearly, their level of contribution will be documented, and tracking performance measures will be shared with each partner or transferred to other service providers, thus reducing the impact on staff time.

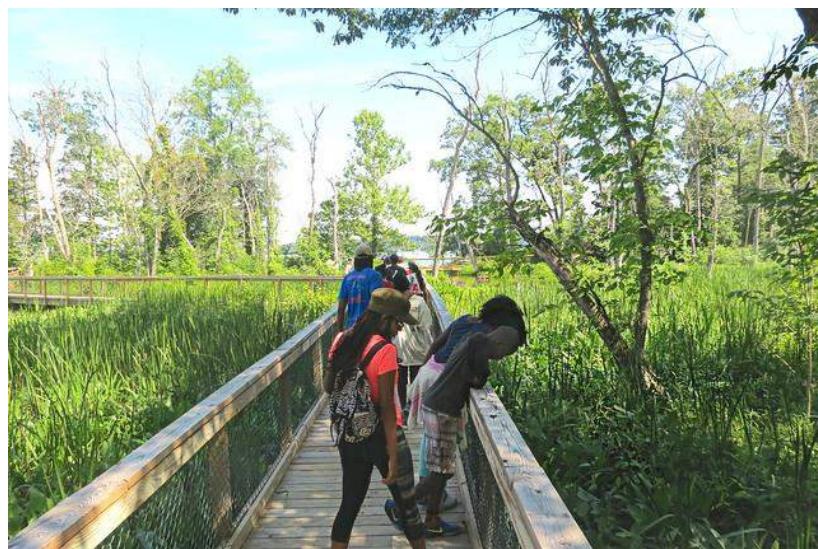
PROGRAM AND MANAGEMENT STRATEGY

CLASSIFICATION OF SERVICES

As noted previously in this plan, the classification of services is an important framework for how programs and services can be developed, organized, managed, and refined. The service classification process consists of the following steps:

1. A definition for each program or service classification was developed that fits the legislative intent and expectations, the ability to meet public needs within the appropriate areas of service, and the mission and core values of Clinch River State Park (and the Virginia State Parks System).
2. Criteria were developed that evaluated each area and function within the program and service to determine the classification that best fit.

The classification matrix on the following page was developed as a guide for Clinch River State Park staff to follow when classifying programs and services and how that program or service needs to be managed with regard to cost recovery. Establishing clarification of what constitutes a “**Core Public Service**”, “**Important Public Service**”, and “**Value Added Service**” will provide the staff and its stakeholders a better understanding of why and how to manage each program or service area as it applies to public value and private value.



CRITERIA TO CONSIDER	CORE PUBLIC SERVICES	IMPORTANT PUBLIC SERVICES	VALUE ADDED SERVICES
Public interest or developmental importance as well as mandated by law and is mission aligned	High Public Expectation	High Public Expectation	High Individual and Interest Group Expectation
Financial sustainability	Free, Nominal or Fee Tailored to Public Needs — Requires Public Funding	Fees Cover Some Direct Costs — Requires a Balance of Public Funding and a Cost Recovery Target	Fees Cover Most Direct and Indirect Costs — Some Public Funding as Appropriate
Benefits – i.e. health, safety, and protection of a valuable asset.	Substantial Public Benefit (negative consequence if not provided)	Public and Individual Benefit	Primarily Individual Benefit
Competition in the market	Limited or No Alternative Providers	Alternative Providers Unable to Meet Demand or Need	Alternative Providers Readily Available
Access	Open Access by All	Open Access / Limited Access to Specific Users	Limited Access to Specific Users

The consultant team used the workload analysis task definitions to develop a service classification recommendation for Clinch River State Park. The recommendations are based upon national best practices. There is, of course, flexibility within the suggested classifications for the parks to adjust as necessary. It should be noted that the classifications are developed in relation to the user. See Appendix B for the recommended service classifications.

PROGRAMS AND SERVICES

FACILITY USAGE

By far the most financially lucrative group of services provided at Clinch River State Park will be varied facility usage. This includes parking, picnic shelters, lodge rental, campsites, and improved accommodations.

DAY-USE FACILITIES

The variety of day use facilities that will be revenue generating will also contribute to the overall usability of the state park. This including parking fees, rentable picnic shelters/pavilions, and rental of indoor multi-purpose space in the ledge for private and special events.

OVERNIGHT STAYS

The primary core service of Clinch River State Park pertaining to that which has the highest potential for revenue generation to support overall operating costs is camping and overnight stays. While this may not account for the most visitors, it is certainly anticipated to be the highest revenue yielding function of the park. Having a blend of overnight stay options from varying levels of camping to improved accommodations like cabins and yurts is critical to not only diversify usage but also to increase the revenue generation capacity of the park.

SELF-GUIDED RECREATION

A major core service of Clinch River State Park is the variety of self-guided recreation opportunities supported by the natural and built infrastructure of the park. This also will contribute to potential equipment rental opportunities that supports self-guided experiences with the possibility of adding guided river trips as an optional service provided by concessionaires. Self-guided experiences for users that bring their own equipment can enjoy the Clinch River State Park is anticipated to be the by far the most common type of park usage. All of these services can be organized to provide a variety of recreational options:

- Self-guided recreation – land based
 - Camping
 - Hiking
 - Mountain biking
 - Horseback riding
 - Geocaching
 - General recreation and sport
- Self-guided recreation – river based
 - Kayaking / canoeing
 - Rafting
 - Tubing
 - Stand-up paddleboarding

EQUIPMENT RENTAL AND SHUTTLE SERVICES

Equipment rental for self-guided experiences has the potential of producing sizeable revenues during certain seasons of the year. It is recommended that the basic watercraft rental be restricted to single and tandem kayaks, inner tubes, and stand-up paddleboards. All watercraft rentals should come with paddles and personal flotation devices (PFDs) and must be accompanied with a signed rental agreement that detail usage rules, regulations and restrictions; personal safety responsibilities; indemnification; agreement to pay for rental gear and equipment; and personal assumptions of risk.

Finally, all rental agreements must be accompanied by a standard safety presentation or video that details the hazards of the waterway, courtesy and recreational ethics, usage rules and restrictions, and personal safety guidelines; or a facilitated orientation detailing the same information; or both. Recommended equipment rental and pricing is detailed in the table below. Paddles and PFDs should be included with all watercraft rentals.

Shuttle services could be offered during peak seasons to better enable users to rent equipment at the Sugar Hill unit, put-in at the river access point upstream near St. Paul, and float back to the state park. There could also be shuttle services considered for access points further upstream of the Sugar Hill unit at higher costs to the user. Shuttle services could be considered complimentary for visitors who rent equipment, and at a nominal fee for those that have provided their own equipment.

Usage Type	Cost to User	Length
Single kayak rental	\$25-35	3 hours
Tandem kayak rental	\$40-50	3 hours
Inner tube rental	\$15-20	3 hours
Stand-up paddleboard rental	\$30-40	3 hours

GUIDED SERVICES AND PROGRAMS

Guided services or facilitated programs at Clinch River State Park can include a variety of services and visitor experiences that are either provided directly by state park interpretive staff or by concessionaires. These are detailed below with some examples provided:

- Guided river experiences (concessionaire-operated)
- Guided horseback riding (concessionaire-operated)
- Resource interpretive programs – natural, historic and/or cultural (state park provided)
 - Guided hikes
 - Birding programs
 - Star parties
 - Flora and fauna identification programs
- Junior ranger programs (state park provided)
- Art in nature programs (concessionaire or state park provided)
 - Nature photography
 - Landscape painting
 - Sculpting
- Health and wellness programs (concessionaire-operated)
 - Yoga
 - Tai Chi
 - Trail running

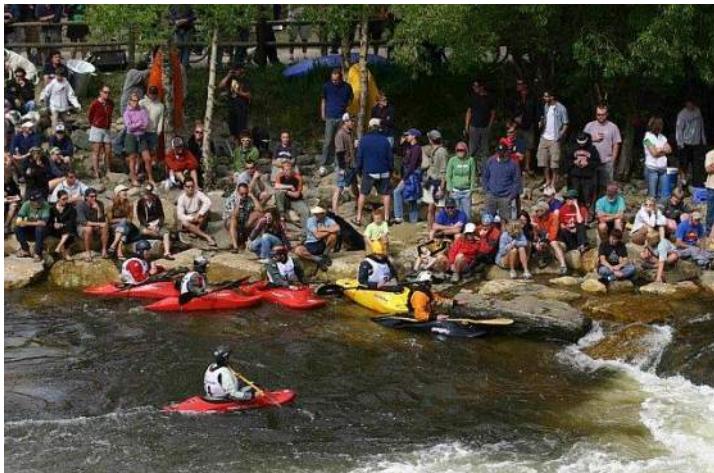


ANCILLARY PROGRAMS

The recommended ancillary programs of Clinch River State Park are those that can help to establish the market position of the sites as a high-quality recreational asset and destination, to diversify usage and enjoyment of these amenities by a broad segment of the community, to support regional tourism to the area, and to generate potentially significant earned revenues for the park.

SPECIAL EVENTS AND FESTIVALS

There are a multitude of special events that could be held at Clinch River State Park, particularly the Sugar Hill unit, that can help to energize these assets in the region and encourage visitors to engage in more recreational use of the Clinch River. Special events can range from a variety of styles including, but not limited to festivals, fundraisers, skill exhibitions, and community social events. It is recommended that a minimum of two events be developed that are annual and on-going. of special events can include, but not be limited to music and crafts festival in the summer and fall and a series of competitive events (running, paddling, bicycling, etc.) in the spring and summer. Additional events can be planned and facilitated throughout the year to continue to refresh the Clinch River experience for both local residents and visitors.



LEFT: Missouri Bluegrass Festival (North Dakota Parks and Recreation);
RIGHT: Yampa River Festival (Friends of the Yampa – Steamboat Springs, Colorado)

MARKETING AND PROMOTIONS

One the operational functions most often misunderstood and under-resourced in park operations is the essential element of marketing and promotion of the programs, services and potential visitor experiences. These operational pro forma have been developed with the assumption that sufficient marketing and promotional support will be provided in order to attract the estimated and potential user base identified. Appropriate marketing expenses have been included the operational model, and these expenses have been built around industry best practices and proven techniques for effectively promoting river recreation experiences.

RECOMMENDED TARGET MARKET GROUPS

- Youth service organizations
- Church groups
- Private and public schools
- Recreational clubs and organizations
- Special user groups
- Organized adult groups
- Community organizations
- Civic clubs and associations
- Enthusiasts and adventure recreationalists
- Naturalists
- General public
- Special recreation user groups
- Families
- Colleges and universities
- Businesses

Marketing and promotional partnerships should be considered and developed with local businesses and community tourism organizations. This can include shared advertising opportunities, as well as potential experience packaging for visitors.

PHASED DEVELOPMENT APPROACH

The development of Clinch River State Park will occur in a phased approach that supports the ability to launch two separate but linked park units in a thoughtful and strategic manner. The current strategy is to develop the park in four primary phases:

- **Acquisition Phase** (current)
- **Development Phase 1** – initial park infrastructure and activation of day-use areas at Sugar Hill Unit, basic infrastructure at Artrip Bent Unit. And development at the Artrip Bent Unit will not begin until all acquisition work at this site is complete.
- **Development Phase 2** – initial overnight accommodations at Sugar Hill Unit, expanded day-use area development at Artrip Bent Unit.
- **Development Phase 3** – expansion of overnight accommodations and day-use areas at Sugar Hill Unit, overnight accommodations at Artrip Bent Unit.

A more detailed description of current planned developments in each phase are provided below.

DEVELOPMENT PHASE 1

Sugar Hill Unit- The following are suggested items for development for the Sugar Hill Unit for Phase 1:

- Develop and install entrance road off US Hwy 58 into the park continuing to park staff residence, shop facility, picnic grove, visitor center/gift shop, and slide boat launch area.
- Install utilities: electricity, water, sewer, and phone, fiber to contact station, shop facility, picnic grove area, and visitor center/gift shop.
- Build Contact Station
- Build a shop facility with support structures and restricted access secondary entrance.
- Build picnic grove with (2) picnic shelters, playground area, parking and restrooms
- Build Visitor Center with park offices, meeting space, gift shop and interpretive display area with parking support (ensure parking support does not affect view shed)
- Build a slide boat launch with a parking area, (5) paddle in camping sites and a pit toilet.
- Develop and install a trail from Visitor Center to the chimney area.
- Develop and install trail from Visitor Center to boat launch area

- Develop and install trail(s) on bluff tops on the SW portion of the park near the staff residence with parking support
- Build (1) additional staff residence near current staff residence

Artrip Bent Unit- The following are suggested items for development for the Artrip Bent Unit for Phase 1:

- Entrance Road off of Artrip Bent Road that leads to a parking area near the current cemetery.
- Self-payment station along entrance road
- Build small maintenance yard area with service access road on the north side of the property
- Service access road/walking path from the cemetery parking lot that leads to Historic Blockhouse area, ridgeline views and trail connection to the future Owen's Preserve property
- Build (1) staff residence, if a suitable option is not acquired in the acquisition phase

DEVELOPMENT PHASE 2

Sugar Hill Unit- The following are suggested items for development for the Sugar Hill Unit for Phase 2:

- Install (20-25) standard camping site campground with a minimum of (2) bathhouses.
- Build camp store and orientation area with small attached shelter for programming with parking
- Install (4) yurt sites with decks and parking support
- Install (3) walk-in tent sites and vault toilet
- Install (10-12) site Water & Electric RV campground with bathhouse on the northeastern side of the property
- Build (1) picnic shelter to picnic grove for a total of (3) picnic shelters
- Install utilities: Power, water, sewer, phone, fiber for above listed phase 2 facilities
- Develop and install Mountain Bike network on the N side of the property (former Hill property)

Artrip Bent Unit- The following are suggested items for development for the Artrip Bent Unit for Phase 2:

- Build Contact Station with office space/small gift sales area attached
- Build (2) picnic shelters with parking support and (2) comfort stations
- Install utilities: Power, water, sewer, phone, fiber for above listed phase 2 facilities
- Develop and install trail connection to historic sites and future Owen's preserve from the NW side of the property picnic area

DEVELOPMENT PHASE 3

Sugar Hill Unit- The following are suggested items for development for the Sugar Hill Unit for Phase 3:

- Install second Water & Electric RV campground with (20-25 sites) with bathhouse.
- Develop and install trail connection to existing Sugar Hill Trail from campground
- Build (12-15) cabins consisting of a mix of 2-bedroom, 3-bedroom and at least one or two 6-bedroom lodges.
- Install group campsites and vault toilet
- Install utilities: Power, water, sewer, phone, fiber for above listed phase 3 facilities

Artrip Bent Unit- The following are suggested items for development for the Artrip Bent Unit for Phase 3:

- Install (12-14) standard campsites with parking support on the northwestern bluff overlooking the river
- Build (up to 4) Yurts with decks and parking support on northwestern bluff overlooking the river
- Build (2) bathhouses to support standard campsites and yurts
- Install (6-8) walk-in camping spots on the southeastern ridge top and vault toilet
- Install utilities: Power, water, sewer, phone, fiber for above listed Phase 3 facilities

Clinch River State Park
Market Analysis and Business Plan

STAFFING

The staffing model projected to support the operations and management of Clinch River State Park including both the Artrip Bent and Sugar Hill units is detailed in the section that follows and is aligned with the planned phased development approach of the sites. This staffing strategy was developed in partnership with the local Virginia State Park staff and their projections for staffing needs. This does not include state park support staff that may be regional or state-wide in their focus. A full projected schedule of full-time equivalent staffing by phase is detailed in the table below.

*Clinch River State Park FTE Phased Staffing Matrix	FTE Park Manager	FTE Asst. Manager - Operations/ LE	FTE Office Manager	FTE Chief Ranger - Operations / LE	FTE Chief Ranger - Visitor Experience	FTE Park Ranger - LE	FTE Park Ranger Maintenance	FTE Housekeeping Manager	Total # per phase
Acquisition Phase (Current)	1			1					2
Phase 1 Development	1			1		1	1		4
Phase 2 Development	1		1	2	1	1	2		8
Phase 3 Development	1	1	1	2	1	1	2	1	10

* Information on FTE matrix based on the 2018 DCR/VSP Staffing Matrix documents

Similarly, wage and seasonal staff will grow as the park moves through the development phases. The projected wage and seasonal employees needed to properly operate and maintain both units of Clinch River State Park are detailed in the table below.

**Clinch River State Park Wage Phased Staffing Matrix	Wage 1500 Admin & Office Specialist III	Wage Seasonal Admin & Office Specialist I	Wage Seasonal Contact Ranger	Wage 1500 Volunteer & Special Events Coord	Wage Seasonal Concession/Liver y/Campstore Ranger	Wage 1500 Ed Support Specialist	Wage Seasonal Interpreter	Wage 1500 Trades Tech II	Wage Seasonal Trades Tech I	Wage 1500 Housekeeper	Total # per phase
Acquisition Phase (Current)	1					1		1			3
Phase 1 Development	1	1	2			1	1	2	2		10
Phase 2 Development	1	2	3		4	1	2	2	3	1	19
Phase 3 Development	2	2	6	1	4	1	3	3	6	4	32

STAFFING COSTS

Based on current pay rates of the agency, FTE and wage/seasonal staffing costs by position are detailed in the tables below. These tables reflect total cost at full build out of the park having completed all three development phases.

Clinch River State Park FTE	FTE Park Manager	FTE Asst. Manager - Operations/ LE	FTE Office Manager	FTE Chief Ranger - Operations / LE	FTE Chief Ranger - Visitor Experience	FTE Park Ranger - LE	FTE Park Ranger Maintenance	FTE Housekeeping Manager
# of positions needed at full build out	1	1	1	2	1	1	2	1
FTE Avg. salary + benefits	\$ 99,552.00	\$ 77,969.00	\$ 77,969.00	\$ 61,445.00	\$ 61,445.00	\$ 61,445.00	\$ 61,445.00	\$61,445.00
Grand Total per position at full build out	\$99,552.00	\$77,969.00	\$77,969.00	\$122,890.00	\$61,445.00	61,445.00	\$122,890.00	\$61,445.00

10 FTE positions
\$685,605
Average; \$68,560 annual

Clinch River State Park Wage 1500/Seasonal	Wage 1500 Admin & Office Specialist III	Wage Seasonal Admin & Office Specialist I	Wage Seasonal Contact Ranger	Wage 1500 Volunteer & Special Events Coord	Wage 1500 Ed Support Specialist	Wage Seasonal Interpreter	Wage 1500 Trades Tech II	Wage Seasonal Concession/Livery Ranger	Wage Seasonal Trades Tech I	Wage 1500 Housekeeper
Positions Needed at Full Build Out	2	2	6	1	1	3	3	4	6	4
Wage 1500/Seasonal Hourly Rate	\$15.00	\$13.00	\$12.00	\$15.00	\$14.50	\$12.50	\$14.00	\$12.50	\$12.50	\$12.50
Annual Hours per Position	2,080	1,040	1,040	2,080	2,080	1,040	2,080	1,040	1,040	2,080
Total Cost per Position	\$31,200.00	\$13,520.00	\$12,480.00	\$31,200.00	\$30,160.00	\$13,000.00	\$29,120.00	\$13,000.00	\$13,000.00	\$26,000.00
Grand Total per Position Type at Full Build Out	\$62,400.00	\$27,040.00	\$74,880.00	\$31,200.00	\$30,160.00	\$39,000.00	\$87,360.00	\$52,000.00	\$78,000.00	\$104,000.00

32 Wage 1500/seasonal positions
\$412.00/hour
Avg. \$12.88/hour

PRICING STRATEGY AND PRO FORMA

The pricing strategy and pro forma includes recommended fees for programs and services, as well as estimated operating costs to manage the multiple units of Clinch River State Park year-round.

EARNED REVENUES

The greatest earned revenue potential of Clinch River State Park is centered on collected parking fees and fees for overnight stays, both camping and improved accommodations. There are additional revenue opportunities from other facility usage, equipment rental and limited retail. It is important to distinguish earned revenue streams as three different categories – core, support, and ancillary – in order to prioritize how operational expenses are allocated. A brief description of recommended revenue sources within each of these categories is provided below.

- **Core revenue streams**
 - Parking fees
 - Camping
 - Improved overnight accommodations
- **Support revenue streams**
 - Equipment rental
 - Picnic shelter rental
 - Indoor multi-purpose space rental
 - Retail sales (food, beverage, visitor supply, etc)
- **Ancillary revenue streams**
 - Program / service concessionaire fees
 - Fees from special events and festivals (vendors, food concessions, etc.)
 - Sponsorship or on-site advertising
 - Additional vending

The recommended pricing for each of these programs and services is based on the existing fee structure of DCR. These are detailed in the table below and on the following page. These represent Virginia resident fees only. Higher fees could be considered for non-Virginia residents if desired. Also, cabin and yurt fees can additionally increase during peak usage seasons.

Program / Service	Recommended Fee	Duration
Parking – Standard vehicle	\$7	Single day
Parking – High occupancy / bus	\$15	Single day
Camping – Standard (walk-in)	\$25	Nightly
Camping – Electric and Water	\$35	Nightly
Cabin (1-bedroom)	\$110	Nightly
Cabin (2-bedroom)	\$125	Nightly
Yurt	\$100	Nightly

Clinch River State Park
Market Analysis and Business Plan

Program / Service	Recommended Fee	Duration
Single kayak rental	\$35	3-hours
Tandem kayak rental	\$45	3-hours
Inner tube rental	\$15	3-hours
Stand-up paddleboard rental	\$35	3-hours
Picnic shelter / pavilion rental	\$50	Single day
Indoor multi-purpose space rental	\$500	5-hours
Guided river programs	Varies	2-3 hours
Guided land programs	Varies	2-3 hours
Interpretive/Junior Ranger programs	Free	≤1 hour
Skill-building programs	Varies	1-2 hours
Health and wellness programs	Varies	≤1 hour
Vendor / concession fees	10-13% gross receipts	Varies

USAGE ASSUMPTIONS FOR THE PRO FORMA

The following usage assumptions for the initial years of operation are derived from the projections and assumptions within this report and are detailed in the table below.

Visitation / Usage Type	Conservative Annual Projection	Aggressive Annual Projection
Total Visitation	25,000	32,000
Parking	9,500	12,500
Camping	4,150	5,000
Cabins / Yurts	2,600	3,400

FINANCIAL PRO FORMA COMPONENTS

These financial pro forma assume the following:

- 245-day peak and shoulder operating season, with 148 prime operating days within that season
- 120-day low season
- Phased development of facilities as noted previously in this report

EXPENSES

- Labor costs
 - Development Phase 1
 - Four FTEs
 - 10 Wage/Seasonal
 - Development Phase 2
 - Eight FTEs
 - 19 Wage/Seasonal
 - Development Phase 3
 - 10 FTEs
 - 32 Wage/Seasonal
- Materials and supplies include office and administrative materials, maintenance supplies, educational materials, and could include some promotional materials
- Equipment costs include annual repair and replacement of maintenance or recreational equipment
- Marketing and promotion expenses includes contracted / purchased marketing materials and advertising, as well as promotional printing
- Maintenance expenses
 - Facility maintenance (materials/supplies and contracted expenses)
 - Site maintenance (materials/supplies and contracted expenses)
 - Resource management (materials/supplies and contracted expenses)
- Miscellaneous expenses can include legal or professional fees, unbudgeted contracted services, etc.

REVENUES

There were two different revenue scenarios developed in this study based on a conservative and a more aggressive visitation projection. The first scenario of a more conservative visitation projection for Year 1 revenues were calculated as shown in the table below.

Clinch River State Park - Conservative Visitation				
Revenue Stream	Average Fee	Year 1 Usage	Projected Revenues	
Parking	\$7	9,500	\$66,500	
Camping	\$30	4,150	\$124,500	
Cabins / Yurts	\$110	2,600	\$286,000	
Equipment rental	Varies	4,000	\$60,000	
Picnic shelter rental	\$50	500	\$25,000	
Additional Ancillary / Support Programs and Services	Varies	6,000	\$15,000	
TOTALS			\$577,000	

Miscellaneous / ancillary revenues are also based on very conservative estimates of potential instructional clinic fees, limited retail revenue, and revenues from special events.

The second revenue scenario are based on a conservative approach to visitation and usage, albeit still aligned with the market analysis results.

Clinch River State Park - Aggressive Visitation				
Revenue Stream	Average Fee	Year 1 Usage	Projected Revenues	
Parking	\$7	12,500	\$87,500	
Camping	\$30	5,000	\$150,000	
Cabins / Yurts	\$110	3,400	\$374,000	
Equipment rental	Varies	5,500	\$75,000	
Picnic shelter rental	\$50	750	\$37,500	
Additional Ancillary / Support Programs and Services	Varies	8,000	\$25,000	
TOTALS			\$749,000	

These two scenarios assume the same level of operational expense to deliver as the difference in the usage projection would not require additional resources to produce the increased service outcome. The first scenario is a more conservative usage estimate, and the second scenario demonstrates a service level required to generate sufficient revenues to fully cover operating expenses as projected.



FINANCIAL PRO FORMAS

The table below details the projected operational pro forma for both conservative and aggressive visitation projections as detailed within this business plan. These are projected as annual financial performance expectations based on the two usage scenarios across all three phases of development. Given it is unknown when development phases will be complete, these are not projected as expected years of completion in the pro forma. It is known that Development Phase 2 will not be completed until years Development Phase 1, and similarly Development Phase 3 will not be completed until some number of years after Development Phase 2. As a result, conservative usage levels at each phase of development and subsequent revenue generation are slightly higher than the previous phase.

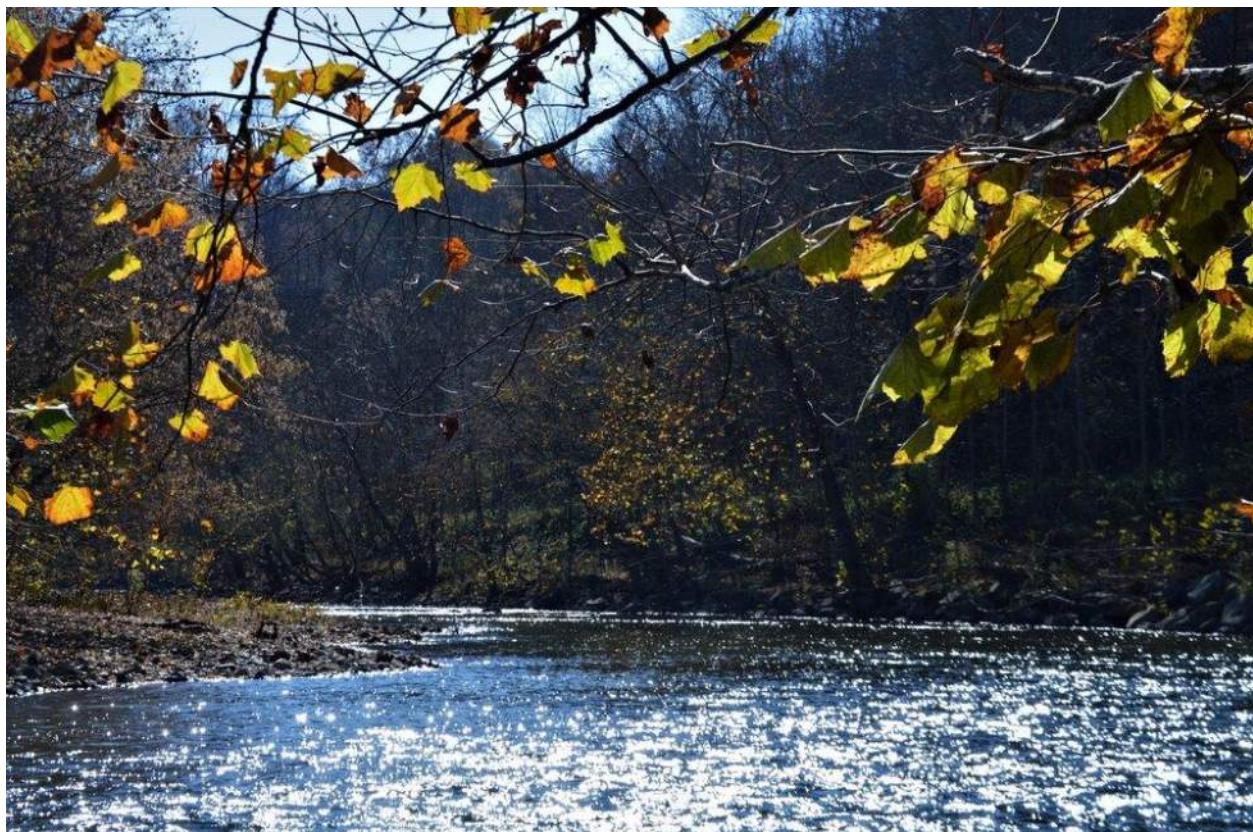
	Development Phase 1 Complete		Development Phase 2 Complete		Development Phase 3 Complete	
	Conservative	Aggressive	Conservative	Aggressive	Conservative	Aggressive
Expenses						
FTE Personnel	\$ 283,887	\$ 298,081	\$ 546,191	\$ 573,501	\$ 685,605	\$ 719,885
Wage/Seasonal Staff	\$ 163,800	\$ 171,990	\$ 327,080	\$ 343,434	\$ 353,737	\$ 371,424
Materials and Supplies	\$ 5,000	\$ 5,250	\$ 10,000	\$ 10,500	\$ 10,815	\$ 11,356
Equipment	\$ 5,000	\$ 5,250	\$ 10,000	\$ 10,500	\$ 14,000	\$ 14,700
Utilities	\$ 15,000	\$ 15,750	\$ 20,000	\$ 21,000	\$ 30,000	\$ 31,500
Marketing	\$ 1,000	\$ 1,050	\$ 10,000	\$ 10,500	\$ 13,000	\$ 13,650
Maintenance	\$ 18,000	\$ 18,900	\$ 20,000	\$ 21,000	\$ 25,000	\$ 26,250
Miscellaneous	\$ 7,500	\$ 7,875	\$ 10,000	\$ 10,500	\$ 10,605	\$ 11,135
subtotal	\$ 499,187	\$ 524,146	\$ 953,271	\$ 1,000,935	\$ 1,142,762	\$ 1,199,900
Revenues						
Parking	\$ 66,500	\$ 87,500	\$ 72,500	\$ 95,600	\$ 79,025	\$ 103,523
Camping	-	-	\$ 124,500	\$ 150,000	\$ 135,705	\$ 177,774
Cabins / Yurts	-	-	\$ 95,333	\$ 124,667	\$ 286,000	\$ 374,000
Equipment rental	\$ 30,000	\$ 37,500	\$ 48,000	\$ 60,000	\$ 60,000	\$ 75,000
Picnic shelter rental	\$ 12,500	\$ 18,750	\$ 25,000	\$ 37,500	\$ 27,250	\$ 40,875
Additional Ancillary / Support Programs and Services	\$ 5,000	\$ 8,333	\$ 10,000	\$ 16,667	\$ 15,000	\$ 25,000
subtotal	\$ 114,000	\$ 152,083	\$ 375,333	\$ 484,433	\$ 602,980	\$ 796,171
Total	\$ (385,187)	\$ (372,063)	\$ (577,938)	\$ (516,501)	\$ (539,782)	\$ (403,729)
Cost Recovery Percent	23%	29%	39%	48%	53%	66%
Required Loss Coverage	\$ 385,187	\$ 372,063	\$ 577,938	\$ 516,501	\$ 539,782	\$ 403,729

This operating pro forma indicates the potential to operate at 23%-29% cost recovery (recovery of operating expenses by earned revenues) with the completion of Development Phase 1. Similarly, this pro forma indicates Clinch River State Park has the potential to operate at 39%-48% cost recovery with the completion of Development Phase 2, and at 53%-66% with the completion of Development Phase 3. starting in Year 1, moving to 34% once the second development phase is complete. The relatively low cost recovery with only Development Phase 1 complete is due to the lack of significant revenue generating amenities such as campgrounds and yurts/cabins. There are likely to be multiple cost avoidance opportunities in these initial operating years in staffing and maintenance costs as operations ramp up and large maintenance issues are typically less prevalent in the first few years of operations. As cost avoidance opportunities are prudently available, cost recovery performance of operations can improve.

CONCLUSION

This *Market Analysis and Business Plan* details out the projected service markets, identifies leading characteristics within those service markets that will most likely affect operations at Clinch River State Park, and build visitation and usage projections based on that data. Additionally, these projections were utilized along with performance metrics at nearby Virginia and Tennessee State Parks, as well as similar “river state parks”, to inform design recommendations for capacity of overnight accommodations. Finally, industry best practices and local circumstances drove the development of an operational model and business strategy that aligns with the expected development phases of the park culminating in a projected financial pro forma at each development phase.

The results of these analyses and business plan indicate that Clinch River State Park is not only going to provide tremendous quality of life and economic value to the local region, but also can be operated with sound business principles and defensible financial performance measures. Virginia State Parks, on average, are 55% self-funded through revenue generation in the parks while 45% of funding comes from the General Assembly. Therefore, in addition to the parks' primary values of conservation, preservation, and recreation to the citizens of the Commonwealth, they are also a good economic value. This is a visionary project that will provide both tangible and intangible benefits to local residents and visitors to the area, and further promotion the local region as a viable eco and adventure tourism destination.



APPENDIX A: CORE VS. CASUAL PARTICIPATION TRENDS

OUTDOOR/ADVENTURE RECREATION

National Core vs Casual Participatory Trends - Outdoor / Adventure Recreation								
Activity	Participation Levels						% Change	
	2015		2019		2020		5-Year Trend	1-Year Trend
	#	%	#	%	#	%		
Hiking (Day)	37,232	100%	49,697	100%	57,808	100%	55.3%	16.3%
Bicycling (Road)	38,280	100%	39,388	100%	44,471	100%	16.2%	12.9%
Casual (1-25 times)	18,845	49%	20,796	53%	23,720	53%	25.9%	14.1%
Core(26+ times)	19,435	51%	18,592	47%	20,751	47%	6.8%	11.6%
Fishing (Freshwater)	37,682	100%	39,185	100%	42,556	100%	12.9%	8.6%
Casual (1-7 times)	20,206	54%	20,857	53%	24,309	57%	20.3%	16.6%
Core(8+ times)	17,476	46%	18,328	47%	18,247	43%	4.4%	-0.4%
Camping (< 1/4 Mile of Vehicle/Home)	27,742	100%	28,183	100%	36,082	100%	30.1%	28.0%
Camping (Recreational Vehicle)	14,699	100%	15,426	100%	17,825	100%	21.3%	15.6%
Casual (1-7 times)	7,843	53%	8,420	55%	11,281	63%	43.8%	34.0%
Core(8+ times)	6,856	47%	7,006	45%	6,544	37%	-4.6%	-6.6%
Fishing (Saltwater)	11,975	100%	13,193	100%	14,527	100%	21.3%	10.1%
Casual (1-7 times)	6,971	58%	7,947	60%	9,109	63%	30.7%	14.6%
Core(8+ times)	5,004	42%	5,246	40%	5,418	37%	8.3%	3.3%
Birdwatching (>1/4 mile of Vehicle/Home)	13,093	100%	12,817	100%	15,228	100%	16.3%	18.8%
Backpacking Overnight	10,100	100%	10,660	100%	10,746	100%	6.4%	0.8%
Bicycling (Mountain)	8,316	100%	8,622	100%	8,998	100%	8.2%	4.4%
Casual (1-12 times)	3,862	46%	4,319	50%	4,803	53%	24.4%	11.2%
Core(13+ times)	4,454	54%	4,302	50%	4,194	47%	-5.8%	-2.5%
Skateboarding	6,436	100%	6,610	100%	8,872	100%	37.8%	34.2%
Casual (1-25 times)	3,867	60%	4,265	65%	6,315	71%	63.3%	48.1%
Core(26+ times)	2,569	40%	2,345	35%	2,557	29%	-0.5%	9.0%
Fishing (Fly)	6,089	100%	7,014	100%	7,753	100%	27.3%	10.5%
Casual (1-7 times)	3,843	63%	4,493	64%	5,020	65%	30.6%	11.7%
Core(8+ times)	2,246	37%	2,521	36%	2,733	35%	21.7%	8.4%
Archery	8,378	100%	7,449	100%	7,249	100%	-13.5%	-2.7%
Casual (1-25 times)	7,038	84%	6,309	85%	6,102	84%	-13.3%	-3.3%
Core(26+ times)	1,340	16%	1,140	15%	1,147	16%	-14.4%	0.6%
Climbing (Indoor)	n/a		5,309	100%	5,535	100%	n/a	4.3%
Roller Skating (In-Line)	6,024	100%	4,816	100%	4,892	100%	-18.8%	1.6%
Casual (1-12 times)	4,246	70%	3,474	72%	3,466	71%	-18.4%	-0.2%
Core(13+ times)	1,778	30%	1,342	28%	1,425	29%	-19.9%	6.2%
Bicycling (BMX)	2,690	100%	3,648	100%	3,880	100%	44.2%	6.4%
Casual (1-12 times)	1,457	54%	2,257	62%	2,532	65%	73.8%	12.2%
Core(13+ times)	1,233	46%	1,392	38%	1,348	35%	9.3%	-3.2%
Climbing (Traditional/Ice/Mountaineering)	2,571	100%	2,400	100%	2,456	100%	-4.5%	2.3%
Climbing (Sport/Boulder)	n/a		2,183	100%	2,290	100%	n/a	4.9%
Adventure Racing	2,864	100%	2,143	100%	1,966	100%	-31.4%	-8.3%
Casual (1 times)	1,121	39%	549	26%	328	17%	-70.7%	-40.3%
Core(2+ times)	1,743	61%	1,595	74%	1,638	83%	-6.0%	2.7%
NOTE: Participation figures are in 000's for the US population ages 6 and over								
Participation Growth/Decline		Large Increase (greater than 25%)		Moderate Increase (0% to 25%)		Moderate Decrease (0% to -25%)		Large Decrease (less than -25%)
Core vs Casual Distribution		Mostly Core Participants (greater than 75%)		More Core Participants (56-74%)		Evenly Divided (45-55% Core and Casual)		More Casual Participants (56-74%)
								Mostly Casual Participants (greater than 75%)

Clinch River State Park
Market Analysis and Business Plan

WATER SPORTS/ACTIVITIES

National Core vs Casual Participatory Trends - Water Sports / Activities										
Activity	Participation Levels							% Change		
	2015		2019		2020		5-Year Trend	1-Year Trend		
	#	%	#	%	#	%				
Kayaking (Recreational)	9,499	100%	11,382	100%	13,002	100%	36.9%	14.2%		
Canoeing	10,236	100%	8,995	100%	9,595	100%	-6.3%	6.7%		
Snorkeling	8,874	100%	7,659	100%	7,729	100%	-12.9%	0.9%		
Casual (1-7 times)	7,002	79%	6,192	81%	6,374	82%	-9.0%	2.9%		
Core(8+ times)	1,872	21%	1,468	19%	1,355	18%	-27.6%	-7.7%		
Jet Skiing	6,263	100%	5,108	100%	4,900	100%	-21.8%	-4.1%		
Casual (1-7 times)	4,425	71%	3,684	72%	3,783	77%	-14.5%	2.7%		
Core(8+ times)	1,838	29%	1,423	28%	1,116	23%	-39.3%	-21.6%		
Surfing	2,701	100%	2,964	100%	3,800	100%	40.7%	28.2%		
Casual (1-7 times)	1,665	62%	2,001	68%	2,507	66%	50.6%	25.3%		
Core(8+ times)	1,036	38%	962	32%	747	34%	-27.9%	-22.3%		
Stand Up Paddling	3,020	100%	3,562	100%	3,675	100%	21.7%	3.2%		
Sailing	4,099	100%	3,618	100%	3,486	100%	-15.0%	-3.6%		
Casual (1-7 times)	2,818	69%	2,477	68%	2,395	69%	-15.0%	-3.3%		
Core(8+ times)	1,281	31%	1,141	32%	1,091	31%	-14.8%	-4.4%		
Rafting	3,883	100%	3,438	100%	3,474	100%	-10.5%	1.0%		
Water Skiing	3,948	100%	3,203	100%	3,050	100%	-22.7%	-4.8%		
Casual (1-7 times)	2,835	72%	2,355	74%	2,189	72%	-22.8%	-7.0%		
Core(8+ times)	1,112	28%	847	26%	861	28%	-22.6%	1.7%		
Wakeboarding	3,226	100%	2,729	100%	2,754	100%	-14.6%	0.9%		
Casual (1-7 times)	2,308	72%	1,839	67%	2,007	73%	-13.0%	9.1%		
Core(8+ times)	918	28%	890	33%	747	27%	-18.6%	-16.1%		
Kayaking (White Water)	2,518	100%	2,583	100%	2,605	100%	3.5%	0.9%		
Scuba Diving	3,274	100%	3,715	100%	2,588	100%	-21.0%	-30.3%		
Casual (1-7 times)	2,405	73%	2,016	54%	1,880	73%	-21.8%	-6.7%		
Core(8+ times)	869	27%	699	46%	708	27%	-18.5%	1.3%		
Kayaking (Sea/Touring)	3,079	100%	2,652	100%	2,508	100%	-18.5%	-5.4%		
Boardsailing/Windsurfing	1,766	100%	1,405	100%	1,268	100%	-28.2%	-9.8%		
Casual (1-7 times)	1,461	83%	1,112	79%	1,015	80%	-30.5%	-8.7%		
Core(8+ times)	305	17%	292	21%	253	20%	-17.0%	-13.4%		

NOTE: Participation figures are in 000's for the US population ages 6 and over

Participation Growth/Decline	Large Increase (greater than 25%)	Moderate Increase (0% to 25%)	Moderate Decrease (0% to -25%)	Large Decrease (less than -25%)	
Core vs Casual Distribution	Mostly Core Participants (greater than 75%)	More Core Participants (56-74%)	Evenly Divided (45-55% Core and Casual)	More Casual Participants (56-74%)	Mostly Casual Participants (greater than 75%)

APPENDIX B: CLASSIFICATION OF SERVICES

CLASSIFICATION OF SERVICES			
For each Service place an 'X' to indicate if it is an Essential, Important, or Value-Added service			
Service	Essential	Important	Value-Added
	Mostly PUBLIC good / Part of the Mission / Serves majority of the Community / Highest Level of Subsidy offered / "This service MUST be provided"	Mix of PUBLIC and PRIVATE good / Important to the community / Serves the broad community / Some level of subsidy offered / "This service SHOULD USUALLY be provided"	Mostly PRIVATE good / Enhanced Community Offering / Serves niche groups / Limited to no subsidy / "This service is NICE to provide"
Visitor Services			
Ranger Station	X		
Camper Services		X	
Enterprise Sales		X	
General Visitor Services	X		
Interpretation/Education			
Recurring Public Programs or Tours		X	
Special Event Programming			X
Educational Programs for Schools		X	
Interpretive Media	X		
Public Safety and Enforcement			
Public Safety and Compliance Patrol	X		
Incident Reporting	X		
Coordination with Law Enforcement	X		
Assist Emergency Services	X		
Safety Planning and Training	X		
Heritage Resource Management			
Artifact Collections/Information Management	X		
Cultural Resources Protection and Management	X		
Heritage Resource Management, Stabilization, Preservation, and Compliance	X		
Maintenance			
Maintenance Planning and Management	X		
Major Maintenance/Capital Project Implementation	X		
Routine/Preventative Maintenance	X		
Equipment/Vehicle Repair	X		
Custodial Duties	X		
Site Inspections	X		
Recreation Impact management	X		
Landscape management	X		
Weed management	X		
Hazard Tree and Forest Management	X		
Public Water System Mgmt	X		
Travel	X		
Park			
Budget Management	X		
Contract/agreement management	X		
Marketing		X	
Grant Writing		X	
Issuing and Administering Permits	X		
Oversee Visitor Studies		X	
Enterprise	X		
Planning			
Planning	X		
Major Maintenance/ Capital Development Management	X		
Regulatory Processes/Environmental Assessments	X		
Administration			
Administrative Duties	X		
Purchasing	X		
Staff Management			
Employee Recruitment	X		
Employee Performance Management	X		
Supervision	X		
Policies and Procedures	X		
Employee Training	X		
Volunteer Management		X	
Collaboration/Partnership			
Collaborating with local officials		X	
Collaboration with partner groups		X	
Public Presentations and Meetings		X	
Collaboration with Adjacent Landowners	X		
Department/Division work	X		
Interdepartmental coordination	X		

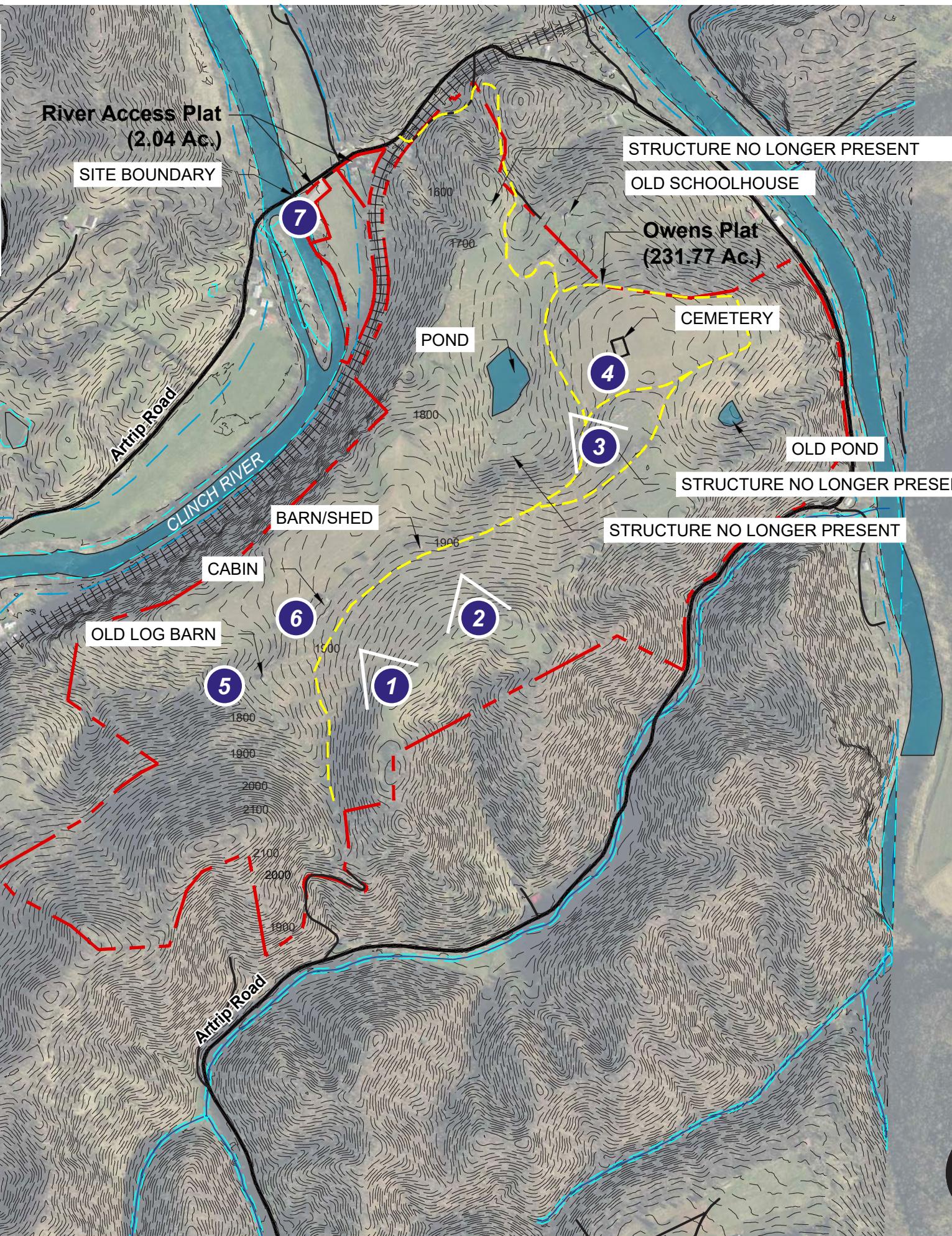
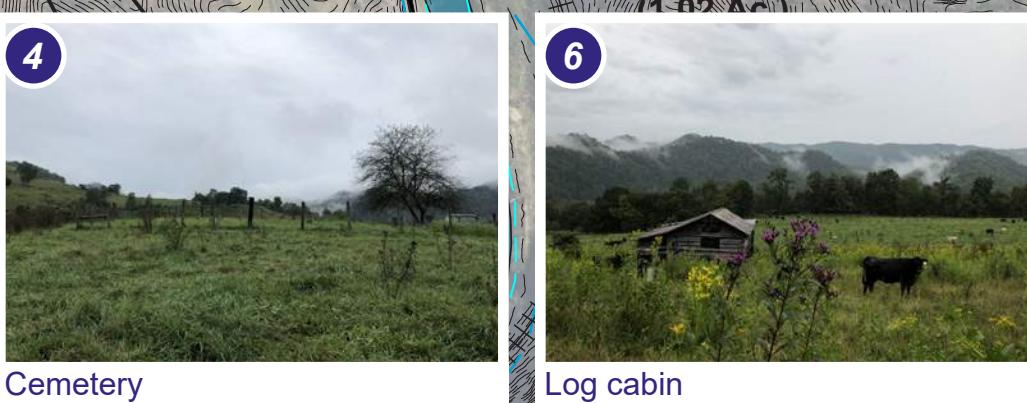
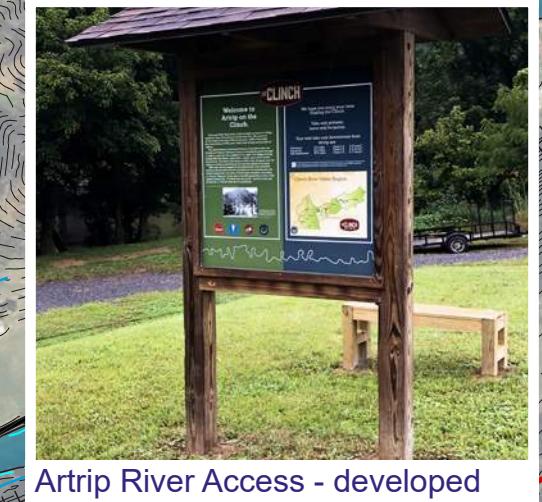
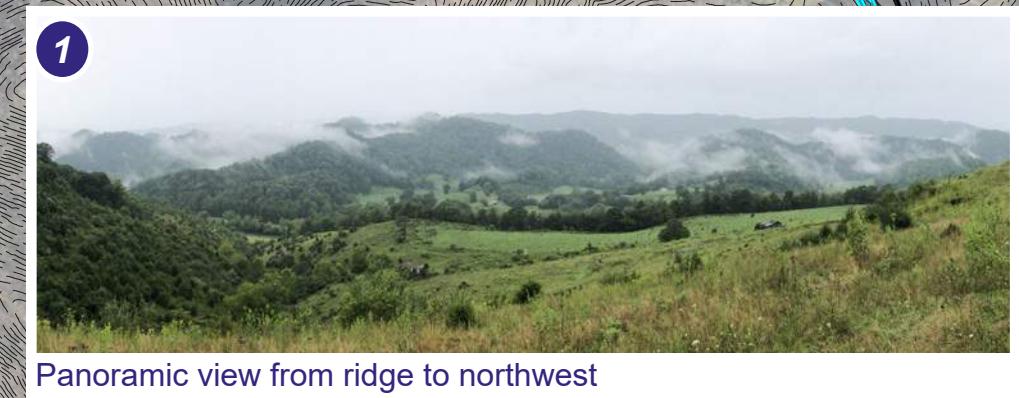


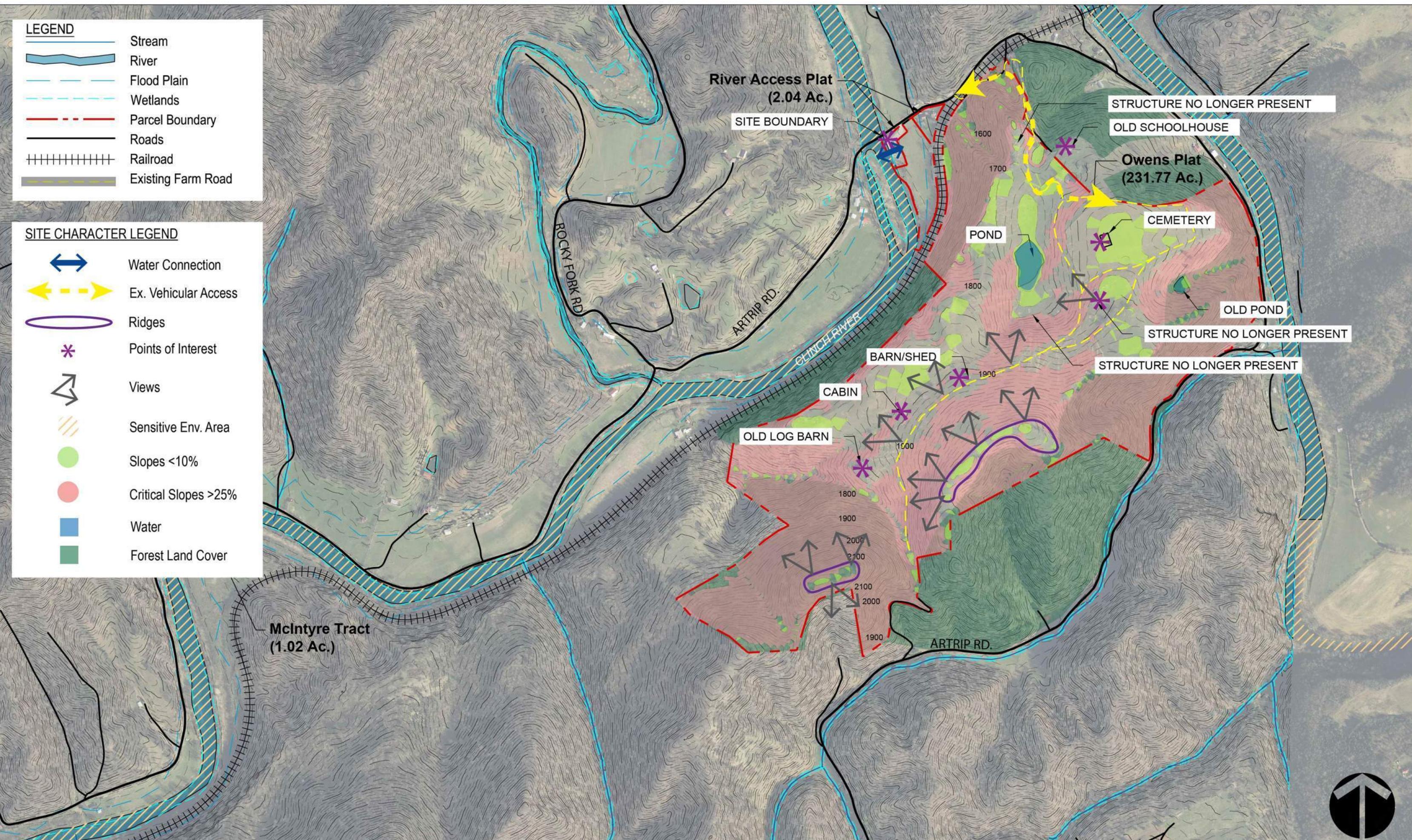
APPENDIX E

CLINCH RIVER STATE PARK ANCHOR SITE MAPS

LEGEND

- Stream
- River
- Flood Plain
- Wetlands
- Parcel Boundary
- Roads
- Railroad
- Existing Farm Road







1
River Access - no existing improvements



2
Orchard picnic area



3
Views - the crest of the site gives views to the south across the park



4
Chimney - historic building remnant and picnic shelter



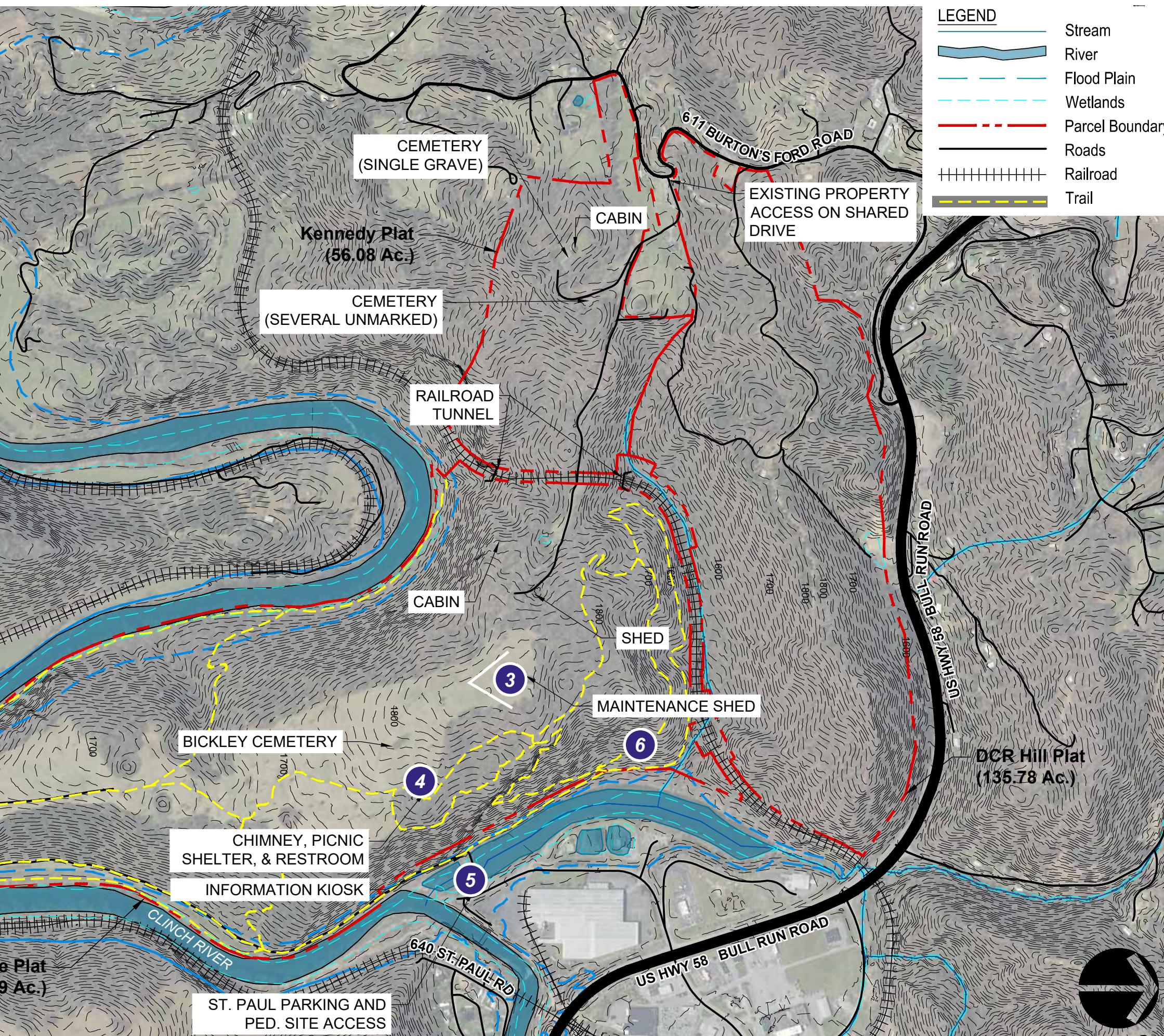
Virginia Department of Conservation & Recreation



5
Existing pedestrian access to site - via Town of St. Paul parking lot



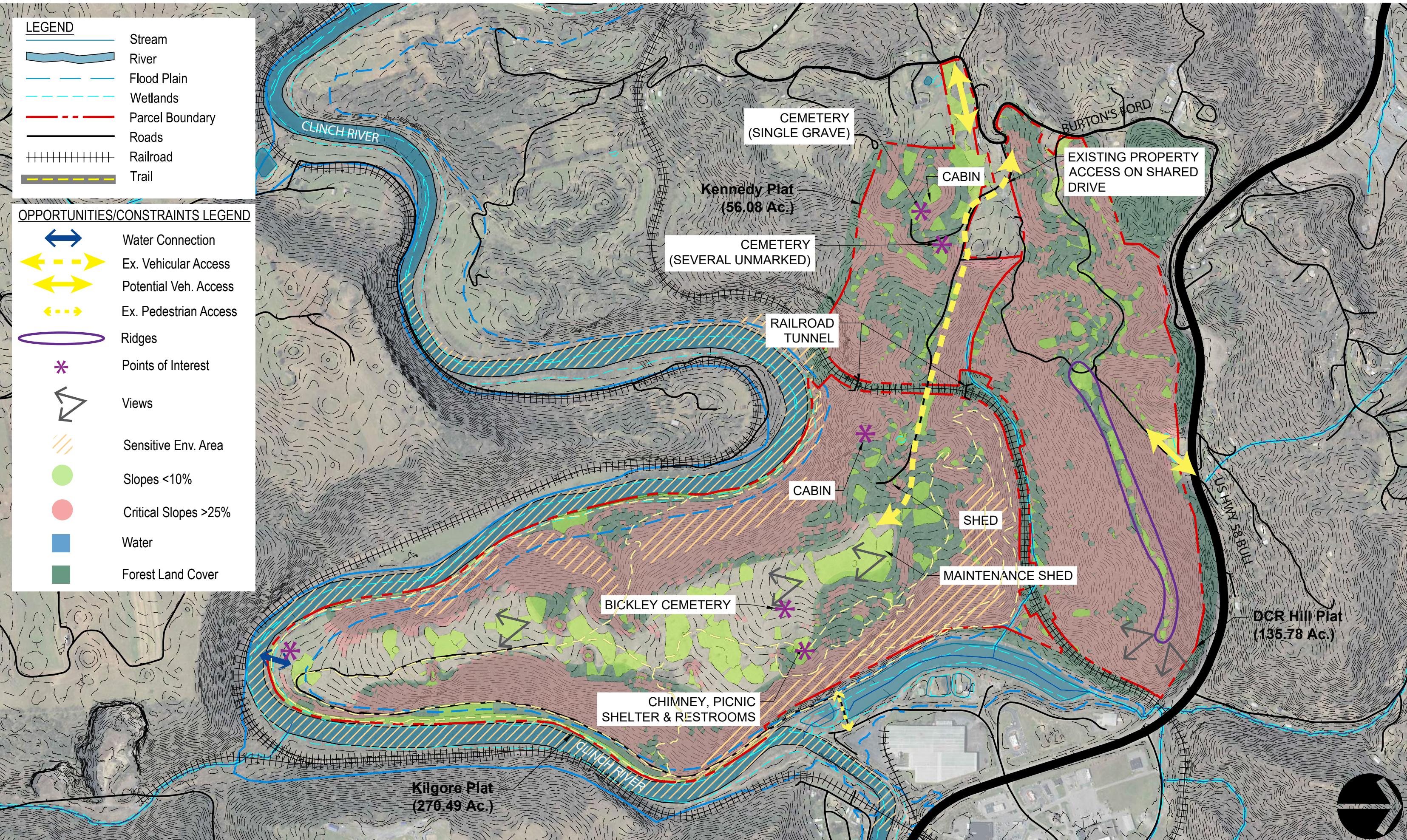
6
Trails - a network of hiking trails currently exists onsite




CLINCH RIVER STATE PARK - COMPREHENSIVE MASTER PLAN

Wise County - Sugar Hill Unit: Existing Conditions Photo Inventory

11/19/2021 350'
0' 700'
Scale: 1"=700'-0"







APPENDIX F

CLINCH RIVER STATE PARK OVERALL MASTER PLAN MAPS – TAZEWELL TO TENNESSEE STATE LINE

