

There is potential for the little brown bat (*Myotis lucifugus*) and /or the tri-colored bat (*Perimyotis subflavus*), and the Northern Long-eared bat (*Myotis septentrionalis*, G1G2/S3/LT/LT) to occur within the project areas. Due to the legal status of little brown bat and tri-colored bat, DCR recommends coordination with the VDGIF to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570). Due to the legal status of the Northern Long-eared bat and the associated final 4(d) rule effective February 16, 2016, if tree removal is proposed for the project DCR recommends coordination with the USFWS and the VDGIF to ensure compliance with protected species legislation.

Caseknife, Tunnel Hollow, Gatewood Reservoir and Little Creek

According to the information currently in Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

Dismal Area

According to the information currently in our files, the Dismal Creek Stream Conservation Unit is located adjacent to the project site (Unit 18). Stream Conservation Units (SCUs) identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are also given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain. The Dismal Creek SCU has been given a biodiversity ranking of B4, which represents a site of moderate significance. The natural heritage resource associated with this site is:

Etheostoma osburni

Candy darter

G3/S1/LE/NL

The Candy darter occurs in the New River drainage of Virginia and the Appalachian Plateaus of West Virginia (Jenkins and Burkhead, 1994). It inhabits rocky, clear, and small to large creeks in unsilted runs and riffles (Burkhead and Jenkins, 1991).

Threats to the habitat of this species include siltation and turbidity (Burkhead and Jenkins, 1991). In addition, the stocking of trout may result in predation of the Candy darter while the spawning sites may be trampled by wading trout fishermen (Burkhead and Jenkins, 1991). Please note, that this species is currently classified as endangered by the United States Fish and Wildlife Service (USFWS).

In addition, the Dismal Creek Conservation Site is located within the project site (Units 9, 10, 11, 16, and 18). Dismal Creek Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The majority of the natural heritage resources associated with conservation site are calciphilic wetland plants and communities. These include an excellent population of the globally rare grass Bog bluegrass (*Poa paludigena*, G3/S2/NL/NL), a good population of the globally rare mint, Torrey's mountain-mint (*Pycnanthemum torrei*, G2/S2/NL/NL), a Central Appalachian Seepage Swamp (G3/S3/NL/NL) and three discrete occurrences of the Central Appalachian Calcareous Shrub Fen/Seep (G1?/S1/NL/NL). These resources together make Dismal Creek one of the finest botanical sites in Virginia.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations. Due to the legal status of the Candy darter, DCR also recommends continued coordination with the USFWS to ensure compliance with protected species legislation.

There is potential for the little brown bat (*Myotis lucifugus*) and /or the tri-colored bat (*Perimyotis subflavus*), and the Northern Long-eared bat (*Myotis septentrionalis*, G1G2/S3/LT/LT) to occur within the project areas. Due to the legal status of little brown bat and tri-colored bat, DCR recommends coordination with the VDGIF to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570). Due to the legal status of the Northern Long-eared bat and the associated final 4(d) rule effective February 16, 2016, if tree removal is proposed for the project DCR recommends continued coordination with the USFWS and coordination with the VDGIF to ensure compliance with protected species legislation.

Peak Creek

According to the information currently in Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.

There is potential for the little brown bat (*Myotis lucifugus*) and /or the tri-colored bat (*Perimyotis subflavus*), and the Northern Long-eared bat (*Myotis septentrionalis*, G1G2/S3/LT/LT) to occur within the project areas. Due to the legal status of little brown bat and tri-colored bat, DCR recommends coordination with the VDGIF to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570). Due to the legal status of the Northern Long-eared bat and the associated final 4(d) rule effective February 16, 2016, if tree removal is proposed for the project DCR recommends coordination with the USFWS and the VDGIF to ensure compliance with protected species legislation.

In addition, if permanent tree removal is necessary, the proposed project will fragment Ecological Cores (**C1, C2, C3, C4, and C5**) as identified in the Virginia Natural Landscape Assessment (<https://www.dcr.virginia.gov/natural-heritage/vaconvisvnl>), one of a suite of tools in Virginia ConservationVision that identify and prioritize lands for conservation and protection.

Ecological Cores are areas of unfragmented natural cover with at least 100 acres of interior that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune, and beach habitats. Cores also provide benefits in terms of open space, recreation, water quality (including drinking water protection and erosion prevention), and air quality (including carbon sequestration and oxygen production), along with the many associated economic benefits of these functions. The cores are ranked from C1 to C5 (C5 being the least ecologically relevant) using many prioritization criteria, such as the proportions of sensitive habitats of natural heritage resources they contain.

Fragmentation occurs when a large, contiguous block of natural cover is dissected by development, and other forms of permanent conversion, into one or more smaller patches. Habitat fragmentation results in biogeographic changes that disrupt species interactions and ecosystem processes, reducing biodiversity and habitat quality due to limited recolonization, increased predation and egg parasitism, and increased invasion by weedy species.

Therefore minimizing fragmentation is a key mitigation measure that will reduce deleterious effects and preserve the natural patterns and connectivity of habitats that are key components of biodiversity. DCR recommends efforts to minimize edge in remaining fragments, retain natural corridors that allow movement between fragments and designing the intervening landscape to minimize its hostility to native wildlife (natural cover versus lawns). Mapped cores in the project area can be viewed via the Virginia Natural Heritage Data Explorer, available here: <http://vanhde.org/content/map>.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

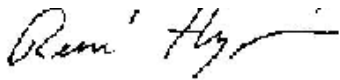
Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please re-submit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dgif.virginia.gov.

Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on this project.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Rene' Hypes", with a stylized flourish at the end.

S. Rene' Hypes
Natural Heritage Project Review Coordinator

Cc: Ernie Aschenbach, VDGIF
Troy Andersen, USFWS

Literature Cited

Burkhead, Noel M. and Robert E. Jenkins. 1991. Candy darter. In *Virginia's Endangered Species: Proceedings of a Symposium*. K. Terwilliger ed. The McDonald and Woodward Publishing Company, Blacksburg, Virginia.

Jenkins, R. E., and N. M. Burkhead. 1994. *Freshwater fishes of Virginia*. American Fisheries Society, Bethesda, Maryland. xxiii + 1079 pp.