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COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

December 17, 2021

Lauren Stull
District Ranger Glenwood/Pedlar Ranger Districts
Green Hill Project Scoping Comments
27 Ranger Lane
Natural Bridge Station, VA, 24579

Re: Green Hill Vegetation Project Scoping

Ms. Stull:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

Prescribed Fire Units

According to the information currently in our files, the North Mountain-Sandbank Mountain Conservation Site is within the project area. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The North Mountain-Sandbank Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resources of concern at this site are:

<i>Myotis septentrionalis</i>	Northern long-eared bat	G1G2/S1S3/LT/LT
<i>Myotis leibii</i>	Eastern small-footed myotis	G4/S2/NL/NL
	Central Appalachian Pine -Oak / Heath Woodland	G4/S4/NL/NL

The Northern long-eared bat occurs within the project area. The Northern Long-eared bat is a small insect-eating bat characterized by its long-rounded ears that when folded forward extend beyond the tip of the nose. Hibernation occurs in caves, mines and tunnels from late fall through early spring and bats occupy summer roosts comprised of older trees including single and multiple tree-fall gaps, standing snags and woody debris. Threats include white nose syndrome and loss of hibernacula, maternity roosts and foraging habitat (NatureServe, 2014). Due to the decline in population numbers, the Northern Long-eared bat has been federally and state listed as "threatened" by the United States Fish and Wildlife Service (USFWS) and the Virginia Department of Wildlife

Resources (VDWR).

The Eastern small-footed myotis is a bat species known from southern Canada and New England, south through the Appalachians and Ohio Valley (NatureServe, 2009). This species has been recorded in Virginia most frequently in association with cavernous limestone (karst) areas and sandstone ridges in the western portion of the state. It roosts in rock crevices, rock shelters, caves, mines, human habitations, and trees in mountainous areas with deciduous or evergreen forest.

Threats to the eastern small-footed myotis include alteration or destruction of its roosting or hibernation habitats.

Pine - Oak / Heath woodlands are widespread throughout both the Ridge and Valley and Blue Ridge provinces in western Virginia. They occur at elevations from below 300 m (1,000 ft) to more than 1,200 m (4,000 ft) on various substrates, but most commonly on acidic, sedimentary and metasedimentary substrates, *e.g.*, sandstone, quartzite, and shale. A few stands occur on Piedmont monadnocks and foothills. Soils are very infertile, shallow, and droughty. Thick, poorly decomposed duff layers, along with dead wood and inflammable shrubs, contribute to a strongly fire-prone habitat. Short-statured table-mountain pine (*Pinus pungens*) and/or pitch pine (*Pinus rigida*) are usually the dominants forming an open overstory, often with co-dominant chestnut oak (*Quercus montana*).

Periodic fire is an important ecological process that provides opportunities for regeneration of both pines and less competitive herbaceous species, while setting back successional encroachment of potential overstory oaks (especially chestnut oak). On cliffs and other very rocky sites, the vegetation is self-perpetuating due to extreme edaphic conditions (Fleming, et al. 2021).

DCR recommends avoiding impacts to natural heritage resources. The Pine-Oak/Heath woodland may benefit from fire in the landscape (natural or Rx). 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 VDWR to ensure compliance with protected species legislation. DCR supports time-of-year restrictions for timber harvest recommended regulatory agencies.

Proposed System Road VDOF Access and Silvicultural Treatments

According to the information currently in our files, the Blacks Gap Conservation Site is within the project areas. The Blacks Gap Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resource of concern at this site is:

Appalachian Xeric Pine Outcrop Woodland

G3/S2?/NL/NL

Coniferous, mixed, or less commonly deciduous woodlands of xeric, edaphically stressful habitats constitute this ecological group. Most expressions of the Appalachian Xeric Pine Outcrop Woodland in Virginia could be characterized as pine-oak woodlands. Virginia pine (*Pinus virginiana*), pitch pine (*Pinus rigida*), and shortleaf pine (*Pinus echinata*) are each co-dominant in one or more classified types. Chestnut oak (*Quercus montana*), post oak (*Quercus stellata*), and blackjack oak (*Quercus marilandica* var. *marilandica*) are representative oak components. In some cases, Montane Acidic Woodlands are floristically similar to Pine-Oak/Heath Woodlands, but are maintained primarily by drought stresses associated with outcrop environments or extremely dry soils rather than by fire (Fleming, et al. 2021).

DCR recommends avoidance of impacts to the natural heritage resources associated with this conservation site.

Proposed Trail, Proposed System Road VDOF Access, Silvicultural Treatments and Prescribed Fire Units

This project has intersected the karst bedrock screening layer. Encountering undocumented caves, sinkholes or other sensitive karst features in this area is possible. During every phase of the project, DCR recommends stabilization of the soil around the site. Minimizing surface disturbance, strict use of E&S control measures appropriate for the location and adherence to best management practices appropriate for karst will help to reduce any potential impact to the karst, groundwater and surface water resources as well as any associated fauna and flora.

If karst features such as sinkholes, caves, disappearing streams, and large springs are encountered during the project, please coordinate with Wil Orndorff (540-230-5960, Wil.Orndorff@dcr.virginia.gov) the Virginia DCR, Division of Natural Heritage Karst Protection Coordinator, to document and minimize adverse impacts. Activities such as discharge of runoff to sinkholes or sinking streams, filling of sinkholes, and alteration of cave entrances can lead to environmental impacts including surface collapse, flooding, erosion and sedimentation, contamination of groundwater and springs, and degradation of subterranean habitat for natural heritage resources (e.g. cave adapted invertebrates, bats). These potential impacts are not necessarily limited to the immediate project area, as karst systems can transport water and associated contaminants rapidly over relatively long distances, depending on the nature of the local karst system. If the project involves filling or “improvement” of sinkholes or cave openings, DCR would like detailed location information and copies of the design specifications. In cases where sinkhole improvement is for storm water discharge, copies of VDOT Form EQ-120 will suffice.

In addition to documented occurrences of Northern long-eared bat associated with the North Mountain-Sandbank Mountain Conservation Site, there is potential for the Northern long-eared bat (*Myotis septentrionalis*, G1G2/S1S3/LT/LT) to occur within the other project areas. 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 VDWR to ensure compliance with protected species legislation.

If any portion of a harvested area is not allowed to re-grow to forest, the proposed project will fragment an Ecological Core(s) (C1) 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. Mapped cores in the project area can be viewed via the Virginia Natural Heritage Data Explorer, available here: <http://vanhde.org/content/map>.

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).

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

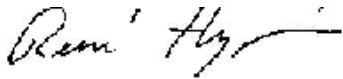
Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any 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 VDWR 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 Amy Martin at 804-367-2211 or amy.martin@dwr.virginia.gov.

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

Sincerely,



S. René Hypes
Natural Heritage Project Review Coordinator

Cc: Wil Orndorff, DCR Karst
Amy Martin, VDWR
Troy Andersen, USFWS

Literature Cited

Fleming, G.P., K.D. Patterson, and K. Taverna. 2021. The Natural Communities of Virginia: a Classification of Ecological Community Groups and Community Types. Third approximation. Version 3.3. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, VA.

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