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November 22, 2021

Theresa Tanner
District Ranger
James River & Warm Springs Ranger District
422 Forestry Road
Hot Springs, VA, 24445

Re: USFS, Potts Creek Vegetation Management Project Draft EA

Dear Ms. Tanner:

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.

DCR reiterates its November 5, 2020 scoping notice comments for this project.

"According to the information in our files, there are numerous natural heritage resources in the project area including significant communities and caves as well as rare plants and animals (see attached Table 1). DCR recommends avoiding construction of "watering holes" "wildlife clearings" and temporary roads in and near existing special management areas and significant natural community occurrences (i.e. Frozen Knob and Solomon's Run Barrens). DCR supports an invasive management plan be developed and implemented for the project, as ground disturbance associated with the proposed activities will increase the likelihood of invasion of non-native species. DCR recommends focusing "non-native invasive species treatment" in and around special management areas and significant natural community occurrences (i.e. Frozen Knob and Solomon's Run Barrens) and in areas where temporary road construction is unavoidable. According to a DCR ecologist, the mature table mountain pine forests in the vicinity of the Frozen Knob and Solomon's Run Barren Conservation Sites will benefit from the prescribed fire treatment." DCR supports reconnaissance, integrated treatments (chemical, mechanical, cultural and combinations), tpre-and post monitoring of treatment areas in the USFS's efforts to control non-native invasive species as stated on page 15 of the response to comments from initial project scoping period document.

"DCR inventory staff conducted field surveys of this project area during 2020 as part of a United States Forest Service (USFS) contract. DCR reconfirmed the occurrence of the rare dragonfly, Black-tipped Darner (*Aeshna tuberculifera*, G2/S2S3/NL/NL) at Potts Pond." DCR supports the exclusion of the pond and immediate surrounding area during the use of prescribed fire as stated on page 13 of the response to comments from initial project scoping period document.

“The Virginia DCR, Division of Natural Heritage karst staff (DCR-Karst) screened this project against the Virginia Speleological Survey (VSS) database, DCR karst layers and the Virginia Department of Energy (DVE) sinkhole coverage for documented sensitive karst features and caves.

This project intersects the following karst layers: Karst Bedrock, DVE Sinkhole coverage, Spelaea Screen layers. It has also intersects the Arritt Jordan Cave Conservation Sites and the Paxton Cave Conservation Site. In total, the VSS database contains four caves that the VSS and the Virginia Cave Board have designated as Significant, an additional 21 caves fall within the shape provided. In all, 25 documented caves are within the boundary of the polygon provided for review. Encountering undocumented caves, additional sinkholes or other sensitive karst features in the large area submitted for review is very possible. In addition to the caves within the site, other caves are in very close proximity to the area under review. Some of the most notable outside of the project footprint are located in the Alleghany Carters Cave Conservation Site and the Blue Spring Cave Conservation Site.

Based on the scoping notice information, most of the physical cave entrances within this project are located outside of the Forest Boundary but are in close proximity. Primary concerns in respect to cave and terrestrial cave invertebrate resources is direct disturbance of cave entrances, sedimentation and activities that may impact water quality or send sediment downstream of active work zones. Many caves may be recharged by land within the National Forest by both surface and subterranean water pathways.

Some of the invertebrate cave resources and significant caves identified within this project footprint are as follows:

Arritt Jordan Cave Conservation Site
The significant caves located within this cave conservation site are Jordan Mines Cave, Arritt Mill Tunnel Cave and Sinks of Potts Creek Cave.
Nelson’s Cave Beetle *(Pseudanophthalmus nelson*, G1G2/S1/NL/NL)
Craig County Cave Amphipod *(Stygobromus estesi*, G4/S3/NL/NL)

Paxton Cave Conservation Site
The significant cave located within this cave conservation site is Paxtons Cave.
A Cave Springtail *(Pygmarrhopalites lacuna*, G1G2/S1S2/NL/NL)
Venetia Millipede *(Conotyla venetia*, G1/S2/NL/NL)

In the Blue Spring Cave Conservation Site just to the northeast of the project, A Cave Pseudoscorpion (*Apochthonius holsingeri* G1/S1/NL/NL) has also been identified. Nelson’s Cave Beetle has also been found in this cave.

The DCR-Karst Program is currently working on updating biological inventories in caves in this region. Some of this work is being funded by a cooperative agreement with the Forest Service. Many of the caves that fall within the scope of this project have never been looked at for biological resources. To date, three new cave locations for cave beetles have been identified in the last few months within the footprint provided for this review. Identifications are pending for these cave beetles but it is likely that they will also be Nelson's Cave Beetle. These new locations fall within the known range for this species. In addition to the cave beetles, other cave collections we made have pending taxonomic determinations. Some of these invertebrates include diplurans, spiders, millipedes, rove beetles, pseudoscorpions, springtails, mites, terrestrial isopods and centipedes. The biological resources in this region are poorly documented at this point. Much work remains to be completed to fully understand what cave resources may be present in the area. The DCR-Karst Program plans to continue to perform work in the caves in this area to better document what may be present.

In addition to invertebrates, bats are known to occupy caves within the footprint of this site. The Tri-colored bat, (*Perimyotis subflavus,* G2G3/S1S3/NL/LE) was last observed on 10/08/2020 in a cave in the Arritt Jordan Cave Conservation Site. The Big brown bat (*Eptesicus fuscus*) was also observed on the same date at the same cave.

A private landowner of one of the caves in the Arritt Jordan Cave Conservation Site also reported seeing a bat in his cave in the winter that meets the description of a Virginia Big-eared Bat (*Corynorhinus townsendii virginianus*, G4T4/S1/LE/LE). At this time, this report has not been substantiated. On 9/30/2020, DCR visited the cave and no bats were observe. Typically bats would not occur a site like this until later in the winter.

According to the DCR-Karst Program, many of the caves that have been surveyed so far within the footprint of this project area may be suitable for use by Tri-colored Bat as hibernation sites in the wintertime and swarming sites at other times of the year. This species is very likely to be encountered on the landscape of this project and should be taken into account.

The disease White Nose Syndrome (WNS) has decimated populations of Northern Long-eared bat (*Myotis septentrionalis,* G1G2/S1S3/LT/LT). Habitat on and off the National Forest in this area does contain suitable winter and summer habitat for this species and also Little brown bat (*Myotis lucifugus*, G3/S1S3/NL/LE). DCR has not documented these species in the caves within this project footprint but little bat work has been performed to date. Practically no winter hibernation counts have been conducted in this area and additional work is needed to assess this area for bats use.

In short, suitable habitat does exist for multiple bat species within the project area and current data is limited. DCR recommends that the USFS take potential impacts to bats into account for all management decisions that may be considered.

Sinkholes mapped by the Virginia Department of Mines, Minerals, and Energy are present in the project area. Typically, additional, smaller unmapped sinkholes can also be present in the vicinity. Sinkholes are areas where surface material has collapsed into the subsurface and into underground watercourses. Sinkhole areas are places where surface water directly affects groundwater quality and flow. What goes into sinkholes comes out in wells and springs, and can degrade drinking water, springs and spring-fed surface waters, and the habitat of subterranean creatures. Discharge of untreated stormwater runoff to sinkholes is discouraged, and sinkholes to which stormwater is diverted or which have been modified to accept stormwater are required by law to be registered as Class 5 Injection Wells with the US Environmental Protection Agency. Filling or alteration of natural (pre-existing) sinkholes is discouraged, and designation of natural buffers around sinkholes is desirable.

During every phase of the project, DCR Karst Program recommends the USFS prioritize the stabilization of the soil around the site. Minimizing surface disturbance, strict use of E&S control measures appropriate for the location and adherence to established US Forest Service 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.

DCR recommends coordination 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 to karst resources. 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.

Please note, when a more defined scope of work with detailed plans at specific locations becomes available for the project, the DCR Karst Program may provide additional comments."

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 Wildlife Resources (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. As noted above there is potential for the little brown bat (*Myotis lucifugus*), the Northern long-eared bat (*Myotis septentrionalis*) and /or the tri-colored bat (*Perimyotis subflavus*) to occur within the project area. Therefore, DCR recommends coordination with USFWS and the VDWR, Virginia's regulatory authority for the management and protection of these species to ensure compliance with the Virginia Endangered Species Act **(**VA ST §§ 29.1-563 – 570). In addition, Potts Creek has been designated as a "Threatened and Endangered Species Water" by DWR for the James Spinymussel. Therefore, DCR recommends coordination with the U.S. Fish and Wildlife Service (USFWS) and Virginia's regulatory authority for the management and protection of this species, the VDWR, to ensure compliance with protected species legislation.

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,

S. Rene' Hypes
Natural Heritage Project Review Coordinator

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