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Organization: VA Department of Conservation and Recreation- Division of Natural Heritage
Title: Project Review Assistant
Comments: April 10, 2025

Edward Wright
USFS- Mount Rodgers Recreation Area
3714 Highway 16
Marion, VA 24354

Re: Little Mountain Prescribed Fire Project

Dear Mr. Wright:

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.

According to the information in our files, the South Fork Holston River - Thomas Bridge Stream Conservation Site (SCS) is located within the project area. SCSs encompass stream/river reaches, waterbodies, and terrestrial contributing areas containing or associated with aquatic or semi-aquatic resources, including upstream and downstream reaches and tributaries up to 3-km stream distance from the aquatic resources. The size and dimensions of an SCS are based on the hydrology of the waterway and surrounding landscape, taking into consideration dam locations and whether the waterway is tidal. SCSs are also given a biodiversity significance ranking (B-rank) based on the rarity, quality, and number of element occurrences they contain. The South Fork Holston River - Thomas Bridge SCS has been given a B-rank of B4, which represents a site of moderate significance. The natural heritage resources associated with this SCS are:

Cottus baileyiBlack SculpinG4Q/S2/NL/NL
Cryptobranchus alleganiensisHellbenderG3/S2/NL/NL
Notropis spectrunculusMirror ShinerG4/S2/NL/NL

The Black Sculpin is endemic to the extreme upper Tennessee drainage in western Virginia and northeastern Tennessee (NatureServe, 2009). The Black sculpin occurs in rocky riffles of headwaters, creeks, and streams, preferring cool to cold water temperatures (Jenkins and Burkhead, 1993).

Potential threats for the Black Sculpin include pollution, impoundment of the river, or other habitat alteration such as dredging or channelization (NatureServe, 2009).

The Hellbender, a large, completely aquatic salamander, prefers larger, clear, and fast-flowing streams of the Mississippi drainage (Martof, et. al, 1980). In Virginia, it is documented from the Holston, Clinch, Powell and New River drainages (Pague, 1991). The Hellbender depends on cool, flowing, well-oxygenated water, and it needs a coarse (rocky) substrate (NatureServe, 2009).
Threats to this species include habitat alteration from impoundments or channelization, and water pollution (Pague, 1991). In agricultural areas, siltation may bury the rocky substrates it requires (NatureServe, 2009). In addition, Hellbenders do not tolerate human recreational use of their habitat (NatureServe, 2009).

The Mirror Shiner is a fish of the Upper Tennessee River drainage including Georgia, Tennessee, North Carolina,

and Virginia. In Virginia, it is known from four southwestern counties in the Holston, Powell and Clinch River drainages (NatureServe, 2009). The Mirror shiner is typically found in cool to cold, clear, upland creeks and small rivers with moderate to high gradient (Jenkins and Burkhead, 1993). The substrates of these waterways are typically comprised of rubble, boulders, or bedrock. Adults occupy the heads and relatively slow parts of pools, backwaters near strongly moving currents, slow runs, and occasionally riffles (Burkhead and Jenkins 1991). It may also be found in muddy pools (Page and Burr 1991). Little is known about the life history of this species, though spawning is thought to occur in late spring and early summer in Virginia (Burkhead and Jenkins, 1991).

Threats to the Mirror shiner include any impacts which may increase the temperature of the stream or alter the substrate. For example, deforestation, especially the loss of riparian cover may result in stream warming, and siltation. Siltation from coal mining already may have extirpated the Powell River population in Virginia (Burkhead and Jenkins 1991).
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, establishment/enhancement of riparian buffers with native plant species and maintaining natural stream flow.
This project is also situated on karst-forming carbonate rock and can be characterized by sinkholes, caves, disappearing streams, and large springs. The Virginia DCR, Division of Natural Heritage karst staff screened this project against the Virginia Speleological Survey (VSS) database, the Virginia Department of Energy (VDE) sinkhole coverage, and other karst layers for documented sensitive karst features. There are known caves in the project that area that are used by the Tricolored bat (=Eastern pipistrelle) (Perimyotis subflavus, G3G4/S1S3/PE/LE).

The Tricolored bat is a very small bat distinguished from other Myotis species by tricolored individual back hairs and inhabits open woods near water, rock cliffs, buildings and caves in the summer. Since 2008, there has been a significant decline in population numbers (greater than 90%) for the Tricolored bat due to white nose syndrome. This species was listed as endangered on April 1, 2016, by the Virginia Department of Wildlife Resources (VDWR) and the United States Fish and Wildlife Service (USFWS) proposed listing the Tricolored bat as endangered on September 14, 2022.

DCR supports leaving a 500-foot buffer around caves with records of use by the Tricolored bat. DCR also recommends avoiding disturbance around all cave entrances within the project area. Due to the legal status of the tri-colored bat, DCR recommends coordination with 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, this project has also intersected the karst bedrock and VDE sinkhole screening layers. Sinkholes mapped by the Virginia Department Energy are within the project site (see Sinkhole layer on the Natural Heritage Data Explorer at vanhde.org). 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. 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.

During every phase of the project, DCR recommends 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 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 protecting all sinkholes and cave entrances from sediment discharge.

If karst features such as additional undocumented 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.

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.

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

New and updated information is continually added to Biotics. Please re-submit a completed order form and project 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 U.S. Fish and Wildlife Service (USFWS) utilizes an online project review process (https://www.fws.gov/office/virginia-ecological-services/virginia-field-office-online-review-process) to facilitate compliance with the Endangered Species Act (16 U.S.C. 1531-1544, 87 Stat. 884) (ESA), as amended. The process enables users to 1) follow step-by-step guidance; 2) access information that will allow them to identify threatened and endangered species, designated critical habitat, and other Federal trust resources that may be affected by their project; and 3) accurately reach determinations regarding the potential effects of their project on these resources as required under the ESA. If you have questions regarding the online review process, please contact virginiafieldoffice@fws.gov.

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 at https://svcgis.dwr.virginia.gov/fwis/ or contact Lee Brann at Lee.Brann @dwr.virginia.gov.

Should you have any questions or concerns, feel free to contact me at 804-625-3979. Thank you for the opportunity to comment on this project.

Sincerely,

Nicki Gustafson
Natural Heritage Project Review Assistant

Cc: Wil Orndorff, DCR-Karst,
Hannah Schul, VDWR

Literature Cited

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