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COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

August 1, 2024

Lauren Stull
USDA Forest Service
27 Ranger Lane
Natural Bridge Station, VA 24579

Re: Jennings Creek Watershed Project

Dear Ms. Stall:

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.

Terrestrial and Aquatic Resources

According to the information in our files, the James River at Buchanan 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 James River at Buchanan SCS has been given a B-rank of B4, which represents a site of moderate significance. The natural heritage resource associated with this SCS is:

Polanisia dodecandra var. dodecandra	Common Clammy-weed	G5T5?/S2/NL/NL

Common Clammy-weed is extremely rare in Virginia. This plant has only been found on cobble bars and within disturbed riverine habitats along the James River (Ludwig, 1998). It is currently known from 13 occurrences and historically known from 1 occurrence 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, retention of natural riparian buffers, and maintaining natural stream flow.

Additionally, according to the information in our files, the Mcfalls Creek, North Creek Woodland - Sprouts Run, and Apple Orchard Mountain Conservation Sites are located 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 (B-rank) based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Mcfalls Creek Conservation Site has been assigned a B-rank of B4, which represents a site of moderate significance. The natural heritage resource associated with this site is:

Triphora trianthophora var. trianthophora	Three birds orchid	G4?T4?/S1/NL/NL

The North Creek Woodland - Sprouts Run Conservation Site has been assigned a B-rank of B3, which represents a site of high significance. The natural heritage resource associated with this site is:

	Central Appalachian Shale Barren (Southern Type)	G3G4/S3S4/NL/NL

The Apple Orchard Mountain Conservation Site has been assigned a B-rank of B1, which represents a site of outstanding significance. The natural heritage resources associated with this site are:

	Central Appalachian Montane Oak – Hickory Forest (Rich Type)	G3G4/S3S4/NL/NL
	Central Appalachian Northern Hardwood Forest (Yellow Birch - Northern Red Oak Type)	G3G4/S3/NL/NL
	Central Appalachian Northern Red Oak Forest	G3G4/S3/NL/NL
	Central Appalachian Rich Cove Forest (Sugar Maple - Basswood Type)	G4?/S3/NL/NL
	Southern Appalachian Northern Red Oak Forest (Evergreen Shrub Type)	G4/S2?/NL/NL
Euphorbia purpurea	Glade Spurge	G3/S2/NL/NL
Isotria medeoloides	Small Whorled Pogonia	G2G3/S2/LT/LE
Peltigera hydrothyria	Waterfan	G4/S1/NL/NL
Plethodon hubrichti	Peaks of Otter Salamander	G2G3/S2S3/SOC/NL
Triphora trianthophora var. trianthophora	Three birds orchid	G4?T4?/S1/NL/NL

DCR recommends avoiding forest treatments that involve tree harvesting including thinning within documented occurrences of natural communities.

In addition to the documented occurrences of rare plants, according to a review by a DCR botanist there is potential for additional undocumented occurrences of Small whorled pogonia, Glade Spurge, Waterfan, Three birds orchid, and Common Clammy-weed along with other rare plants to occur in the project area if suitable habitat exists on site. There is also potential for additional populations of the Peaks of Otter Salamander. Please note, DCR-DNH biologists are currently inventorying portions of the study area for zoological resources. DCR may have additional recommendations for minimizing impacts to natural heritage resources based on these survey efforts.

Due to the potential for this site to support additional populations of natural heritage resources, DCR recommends an inventory for Small whorled pogonia and other rare plants in the portions of the study area that have not been previously surveyed. DCR also recommends a survey for Peaks of Otter Salamander in proposed thinning areas E, G, H, I and J. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

DCR-Division of Natural Heritage biologists are qualified to conduct inventories for rare, threatened, and endangered species. Please contact Anne Chazal, Natural Heritage Chief Biologist, at anne.chazal@dcr.virginia.gov or 804-786-9014 to discuss availability and rates for field work. For a list of USFWS-approved surveyors in Virginia visit https://www.fws.gov/media/collection-approved-surveyor-lists-project-review-process-virginia.

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. Survey results should be coordinated with DCR-DNH and USFWS. Upon review of the results, if it is determined the species is present, and there is a likelihood of a negative impact on the species, DCR-DNH will recommend coordination with VDACS to ensure compliance with Virginia's Endangered Plant and Insect Species Act.

Karst Resources

A small portion of the northwestern edge of the project area is 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 several small caves in the vicinity of the project area, including a shelter cave that is reported to have some archeological significance. This cave is described as being roughly 20 feet long, developed in quartzose sandstone and is documented roughly a quarter of a mile to the northwest of the project boundary. DCR recommends coordination with the USFS archeologist and the Virginia Department of Historic Resources (VDHR) to determine if there are other important archeological sites in the vicinity of this cave.

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.

Stewardship Comments

- DCR recommends prioritizing high basal retention and minimizing ground disturbance for any forestry activities in Units E, F, and G, as thinning treatments have the potential to negatively impact water quality in North Creek. North Creek is the only Tier III Outstanding Natural Resource Water Area in Virginia, and these units are on sloped land proximate to intermittent headwater streams of North Creek.
- DCR supports the shortleaf pine planting for Unit K.

- DCR recommends that black gums and sourwood (Page 9, 3b) be retained similarly to the proposed retention of serviceberry and dogwood (Page 5, 1c) as all four of these species have documented wildlife value. However, the removal of maples and tulip poplars would be consistent with the stated goals of increasing light to the forest floor and retaining wildlife food sources.
- DCR recommends requiring the adoption of best management practices for the prevention of invasive species spread during logging operations, including but not limited to pressure washing their equipment prior to mobilizing for the thinning treatments.
- DCR supports the use of prescribed fire as a management tool, as it will benefit several of the significant natural communities.

Additional Comments

In addition, if any portion of a harvested area is not allowed to re-grow to forest, the proposed project has the potential to impact multiple Ecological Cores **(C1, C2, C3 & C4)** as identified in the Virginia Natural Landscape Assessment (https://www.dcr.virginia.gov/natural-heritage/vaconvisvnla). 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 at least 100 acres of continuous interior, natural cover that provides 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. Interior core areas begin 100 meters inside the nearest core edges and continue to the deepest parts of cores. Cores also provide natural and economic benefits of open space, recreation, water quality (including drinking water recharge and protection, and erosion prevention), and air quality (including carbon sequestration and oxygen production). Cores are ranked from C1 to C5 (C5 being the least significant) using nine prioritization criteria, including the habitats of natural heritage resources they contain.

Impacts to cores occur when their natural cover is partially or completely converted permanently to developed land uses. Habitat conversion to development results in changes that reduce ecosystem processes, biodiversity, population viability and habitat quality due to limited recolonization, increased predation, and increased introduction and establishment of invasive species.

The proposed project has the potential to impact multiple cores including cores with very high (C2) to outstanding (C1) ecological integrity. If any portion of a harvested area is not to be allowed to re-grow to forest (i.e. there is any development and thus permanent fragmentation of the core) further investigation of these impacts is recommended and DCR-DNH can conduct a formal impact analysis upon request. This analysis would estimate direct impacts to cores and habitat fragments and indirect impacts to cores. The final products of this analysis would include an estimate of the total impact of the project in terms of acres. For more information about the analysis and service charges, please contact Joe Weber, DCR Chief of Biodiversity Information and Conservation Tools at Joseph.Weber@dcr.virginia.gov.

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 Jackie Luu at jackie_luu@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 https://services.dwr.virginia.gov/fwis/ or contact Hannah Schul at Hannah.Schul@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,
Roger Kirchen, VDHR

Literature Cited

Ludwig, J.C. 1998. Personal communication. Virginia Department of Conservation and Recreation's Division of Natural Heritage.