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COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

May 13, 2019

Chuck Lane
Clinch District Office
US Forest Service
1700 Park Avenue SW
Norton, VA 24273

Re: High Knob View Enhancement Project

Dear Mr. Lane:

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 currently in our files, the Large-leaf phlox (*Phlox amplifolia*, G3G5/S1/NL/NL) has been documented within the project site. Large-leaved phlox, in the phlox (Polemoniaceae) family, is a tall perennial herb native to the southern and central US. Stems (one to a few per plant) support a loosely branched inflorescence of red-purple or pale to dark pink flowers that bloom from July to August (NatureServe 2010, Weakley in prep.). In Virginia, occurrences range from a few plants to robust colonies, and several are presumed historical. With the exception of Franklin County, all other occurrences in Virginia are in far southwestern to western counties from Lee to Alleghany (Virginia Botanical Associates 2010). Large-leaved phlox is found within a variety of mostly forested habitats throughout its range; in Virginia, habitats include mesic deciduous woods over limestone, shaded limestone cliffs in a wooded ravine, trailside within a bouldery, mesic, ridgecrest forest, sandstone ledges, well-drained alluvial floodplain forest of mixed hardwoods, rich forest, and a roadside utility line corridor (NatureServe 2010). Threats include direct impacts to plants or destruction/degrading of habitat from timber harvests, development, grazing, vegetation maintenance along trails, roads, and utility lines, trampling, and competition from invasive alien plant species (NatureServe 2010).

According to a DCR biologist, the Large-leaf phlox may be negatively impacted by the proposed clearing activities. DCR recommends avoiding the mapped population of this natural heritage resource (Figure 1). DCR also recommends the use of native species similar to those found in surrounding areas when revegetating disturbed areas. The native plant materials should preferably come from reputable nurseries propagating their stock from local sources. Some nurseries also offer native wetland species seed mixes. Invasive species should not be used. In open areas, native warm-season grasses, such as big bluestem, little bluestem, Indian grass, broomsedge, panic grass, and gamma grass, offer good alternatives to alien cool season grasses and legumes. If the use of slow-to-establish native species is not practical for projects requiring erosion control, the use of non-native, *non-invasive*, annual species for temporary stabilization is recommended. For example, a good choice is combining annual rye with a native perennial mix. In a wetland several millet species are available alternatives. The benefit of these annual species is they will die-off in one to two years, allowing the native species to

recolonize the site. Also available for erosion control are nets, blankets, and wattles made from plant fiber, which stabilize the soil while plantings become established.

In addition, the Indiana bat (*Myotis sodalis*, G2/S1/LE/LE), Northern long-eared bat (*Myotis septentrionalis*, G1G2/S1S3/LT/LT) and Eastern Small-footed bat (*Myotis leibii*, G4/S2/NL/NL) have been documented within two miles of the project site. The Indiana bat ranges from the western Ozarks north and east to Michigan and New England, and south to Alabama and Arkansas (NatureServe, 2009). In Virginia, there are records in mountainous regions of the western part of the state. Male and female Indiana bats congregate in the fall to hibernate in caves and mine tunnels in dense clusters. While many males continue to use these underground roosts in the summer, females form maternity colonies under the loose bark of trees such as shagbark hickory, oaks and maples. These bats emerge in the evenings to feed on moths, flies and other insects over tree-lined streams and upland woods.

Indiana bats are sensitive to flooding, pesticide poisoning, and disturbance by human beings, such as vandalism, spelunkers, cave commercialization, and research (Dalton & Handley, 1991; Harvey, 1992). Please note that this species is currently classified as endangered by the United States Fish and Wildlife Service (USFWS) and the Virginia Department of Game and Inland Fisheries (VDGIF).

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 USFWS and the VDGIF.

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.

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, due to the legal status of the Indiana bat, DCR also recommends coordination with the USFWS and the VDGIF, to ensure compliance with protected species legislation.

This project is situated on karst-forming carbonate rock and can be characterized by sinkholes, caves, disappearing streams, and large springs. The Virginia DCR karst staff screened this project against the Virginia Speleological Survey (VSS) database and the Virginia Department of Mines, Minerals and Energy (DMME) sinkhole coverage for documented sensitive karst features and caves. To minimize impacts to karst resources, DCR recommends the stabilization of the soil around the site be prioritized during all the phases of the project and all standard erosion control measures that are appropriate for the site be used.

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) to document and minimize adverse impacts. Discharge of runoff to sinkholes or sinking streams, filling of sinkholes, and alteration of cave entrances can lead to surface collapse, flooding, erosion and sedimentation, groundwater contamination, and degradation of subterranean habitat for natural heritage resources. 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.

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.

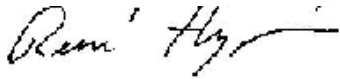
There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

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 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.

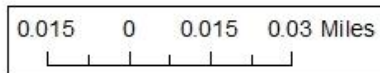
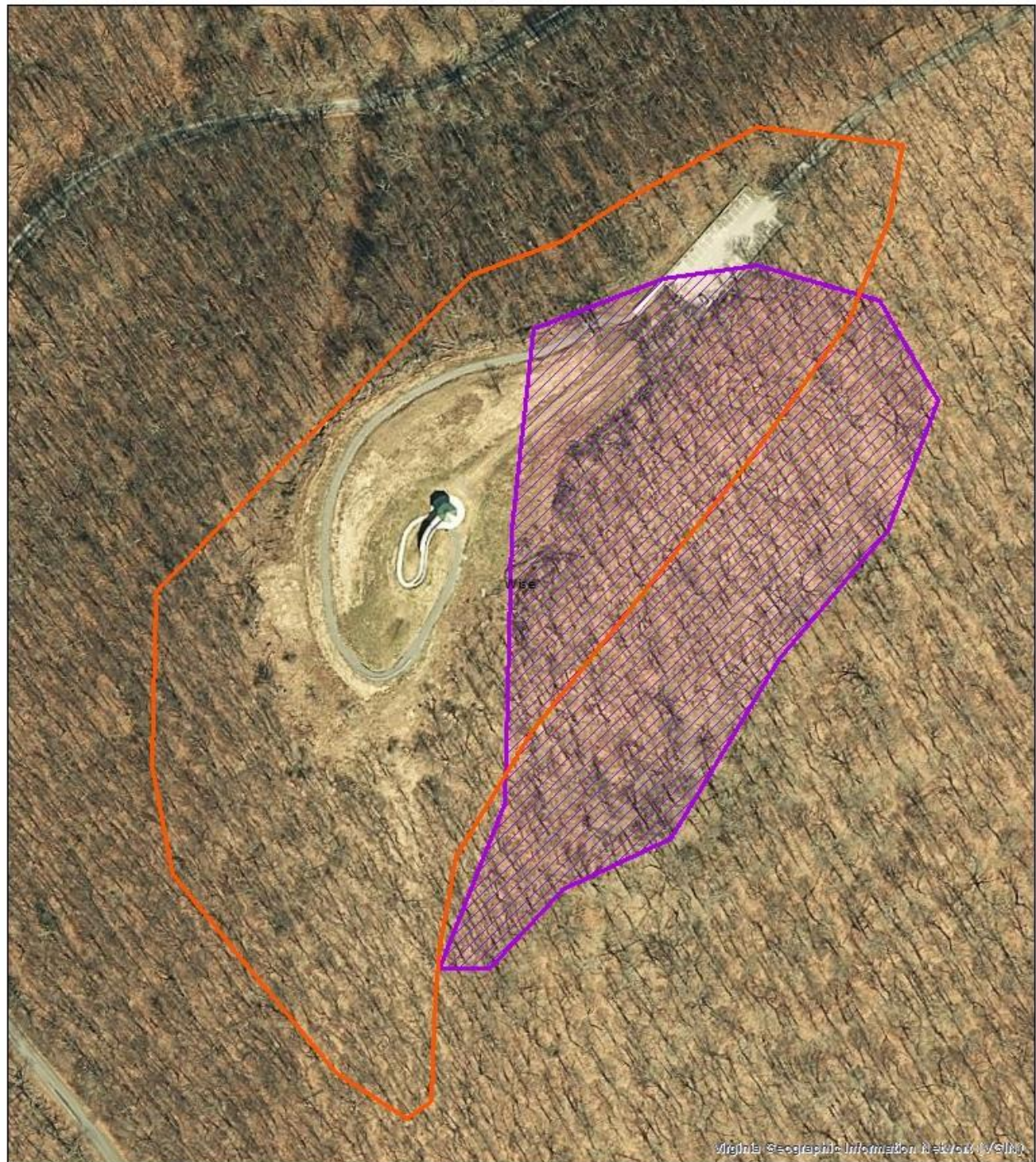
Sincerely,

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

S. René Hypes
Natural Heritage Project Review Coordinator

Cc: Ernie Aschenbach, VDGIF
Troy Andersen, USFWS
Wil Orndorff, DCR-Karst

High Knob View Enhancement Project



Map created May 2019 by DCR-DNH for US Forest Service

Figure 1: Large-leaf phlox population

Literature Cited

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