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*Secretary of Natural Resources*

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**COMMONWEALTH of VIRGINIA**  
**DEPARTMENT OF CONSERVATION AND RECREATION**

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January 4, 2016

Valerie Clarkston  
Environmental Solutions & Innovations, Inc.  
4525 Este Avenue  
Cincinnati, Ohio 45232

Re: PF 15-3 Mountain Valley Pipeline-RTE Surveys

Dear Ms. Clarkston:

The Department of Conservation and Recreation's Division of Natural Heritage's (DCR) mission is conserving Virginia's biodiversity through inventory, protection, and stewardship. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal, unique or exemplary natural communities, and significant geologic formations. DCR inventory staff has reviewed the survey reports and would like to offer the following comments at this time:

**Rare Plant Survey**

DCR has reviewed the "Surveys for Rare Plants Along MVP's Proposed Pipeline Project in Craig, Franklin, Giles, Montgomery, Pittsylvania, and Roanoke Counties, Virginia" dated November 13, 2015. According to John Townsend, DCR botanist, the Small whorled pogonia (*Isotria medeoloides*, G2/S2/LT/LE) survey was conducted during the wrong time of year (August 5-12 and September 24-October 1). The preferred recommended time for counties south of Caroline County for any given year in Virginia is May 25-July 15 as indicated on the United States Fish and Wildlife –Virginia Field Office website:

[http://www.fws.gov/northeast/virginiafield/pdf/endangeredspecies/20120125\\_VIRGINIASurveytimeframeforplans.pdf](http://www.fws.gov/northeast/virginiafield/pdf/endangeredspecies/20120125_VIRGINIASurveytimeframeforplans.pdf).

Due to the legal status of Small whorled pogonia, DCR recommends continued coordination with USFWS to ensure compliance with protected species legislation.

**Loggerhead Shrike Survey**

DCR has reviewed the "Field Surveys for the Loggerhead Shrike Along the Mountain Valley Pipeline in Craig, Montgomery, and Roanoke Counties, Virginia" dated November 13, 2015 and requests copies of any occupancy surveys and additional habitat assessments conducted in 2016 as noted in the report. Due to the legal status of the Loggerhead shrike (*Lanius ludovicianus*, G4/S2B,S3N/NL/LT), DCR recommends continued coordination with VDGIF, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

## Rare Bat Survey

DCR has reviewed the “Listed Bat Studies Along MVP’s Proposed Mountain Valley Pipeline Project in Craig, Franklin, Giles, Montgomery, Pittsylvania, And Roanoke Counties, Virginia” dated November 13, 2015. The survey report on page 4 states there is a maternity colony for Indiana bats in Lee County. However, according to Chris Hobson, DCR zoologist, there is not a maternity colony in Lee County. This is a repetition of a false assumption that because a juvenile male Indiana bat was caught in Lee County during a 1992 graduate study program mist net survey conducted by current DCR zoologist, Chris Hobson, there is an Indiana bat maternity colony in this county, which according to our files does not exist.

The report lists a dead red pine as the roost tree (Roost 482-1) for the Northern long-eared bat (Bat 482) that was radio tagged. Red pine is a non-native in Virginia, according to DCR botanist John Townsend. There are some planted stands of Red pine in the Allegheny Highlands. Please verify the identification of this tree species.

DCR requests additional information including a shapefile of documented occurrences of the Eastern small-footed myotis (*Myotis leibii*, G3/S2/NL/NL) identified during the mist net survey along the pipeline corridor. DCR tracks this state rare bat and would like to update our files with these new occurrences.

### ***New Record for Northern long-eared bat-Giles County***

DCR staff and volunteers visited Canoe Cave on November 30, 2015 for the purpose of biological inventory pursuant to environmental project review. The inventory was initiated in response to the close proximity of the proposed Mountain Valley gas pipeline to Canoe Cave (see map below).

Biological inventory of Canoe Cave, a state designated significant cave located beneath the center line of the proposed Mountain Valley Pipeline, was performed on November 29 and 30, 2015. Taxa collected were two or more genera of millipedes (*Pseudotremia*, *Zygonopus*), two genera of amphipod (*Stygobromus*, *Gammarus* (from spring)), and one genus of aquatic isopod (*Caecidotea* sp.). Aquatic isopods had not previously been documented from the cave. Bait stations were left in three locations in the cave, but no additional cave adapted invertebrate taxa were present at the bait stations on November 30. Traps were left in place to be checked in mid-December. Two tri-colored bats were observed roosting in the cave. However, the fall of 2015 has been exceptionally mild, and hibernating bat species are probably not yet in torpor.

The extent of portions of the cave is not well depicted on the 1943 map. Roots and insects in the cave, as well as portions of the 1943 map, suggest that the cave comes very close to the surface directly beneath the pipeline route. The 1943 map indicates ~ 1000 feet of passage.

A modern resurvey of the cave is underway by members of the Virginia Speleological Survey. Expedition participants (personal communication) estimate ~ 3000’ of dry cave passage. Water from the cave, which includes three, deep lakes at the northeast end of the cave, appears to resurge at a large spring at the bottom of the draw below the cave. There is additional underwater cave passage and potentially more dry cave passage beyond the lakes. However, scuba techniques will be necessary for additional exploration. Certified cave divers have expressed interest, and the property owner is considering this request. Water in the cave is most likely derived from springs that emerge from talus slopes along the northwest slope of Sinking Creek Mountain, upslope from the upper boundary of the limestone outcrop belt. These springs are used as water supplies for several houses and a farm in the area. The landowner has expressed concern about potential impact to these springs from construction and operation of the Mountain Valley Pipeline.

Subsequent to the visit, (b) (6) which owns the cave, shared with DCR staff a copy of correspondence to former owner (b) (6) from Dr. Gary Nussbaum of Radford University. Nussbaum worked in conjunction with Radford University mammologist Dr. Jenny Tipton, who pioneered the study of Virginia’s cave bats. This February 15, 1982 correspondence is attached and includes documentation of a single *Myotis keenii* (Keen’s bat) roosting in the cave. The nature and author of the correspondence lend a high degree of credibility to this report. The Eastern North American populations of this species were subsequently reclassified as a separate species *Myotis septentrionalis* (Northern long-eared bat).



In 2015 *Myotis septentrionalis* was federally listed threatened under the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended, largely in response to severe population declines resulting from White Nose Syndrome. While never found in huge numbers in caves in the mid-Atlantic states, Northern long-eared bats were one of the most commonly captured bats during summer mist net studies in the mountains of western Virginia prior to the devastation brought on by White Nose Syndrome. The 1982 record most likely reflects an individual associated with a larger population in the area near Canoe Cave. This record should be given equal priority to other *Myotis septentrionalis* records of similar vintage and nature, which comprise a significant number of the records for this species. Extensive survey work both at the cave (hibernacula, fall swarm) and during the summer (mist net studies) would be necessary to determine with any certainty the species presence or absence in the project area.

Due to the legal status of the Northern long eared-bat DCR recommends coordination with the US Fish and Wildlife Service (Sumalee Hoskin) and Virginia Department of Game and Inland Fisheries (Rick Reynolds) to address concerns related to the Northern long-eared bat (*Myotis septentrionalis*) record from the cave. DCR also recommends coordination with VDGIF due to the potential future listing of the tri-colored bat (*Perimyotis subflavus*) and the little brown bat (*Myotis lucifugus*).

### Roanoke Logperch Survey

DCR has reviewed the “Habitat Assessments for the Roanoke Logperch (*Percina rex*) Along the proposed Mountain Valley Pipeline in Virginia” dated November 13, 2015. The descriptions of the Roanoke logperch (*Percina rex*, G1G2/S1S2/LE/LE) sites as presented in the report appear to be adequate for determining suitability of habitat. According to the report, the applicant is assuming presence at three waterbodies (i.e., North Fork Roanoke, Roanoke and Pigg Rivers) that are known to harbor Roanoke logperch. According to the habitat

descriptions in the report, some of the sites accessed have detrimental factors such as impoundments, and poor habitat which may not support Roanoke logperch.

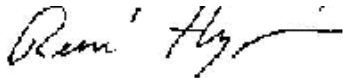
DCR recommends before construction begins, the identified sites with suitable habitat where presence is not assumed be accessed and surveyed. In addition to the Roanoke logperch, the Orange-fin madtom (*Noturus gilberti*, G2/S2/SOC/LT) was included in the habitat assessments due to its common association with the Roanoke logperch. Due to the legal status of the Roanoke logperch and Orange-fin madtom, DCR recommends continued coordination with VDGIF and USFWS to ensure compliance with protected species legislation. DCR requests a copy of any field survey results.

### **Freshwater Mussels Survey**

DCR has reviewed the "Freshwater Mussel (Unionidae) Site Assessments and Surveys for the Proposed Mountain Valley Pipeline in Virginia" dated November 13, 2015. DCR recommends the applicant continue to conduct surveys prior to construction at sites identified as suitable habitat in the table of the report. For sites identified as suitable habitat for freshwater mussels with access restrictions, DCR recommends these sites should be reassessed for access and surveyed if possible prior to construction. Due to the legal status of the James spinymussel (*Pleurobema collina*, G1/S1/LE/LE), Atlantic pigtoe (*Fusconaia masoni*, G2/S2/SOC/LT) and Green floater (*Lasmigona subviridis*, G3/S2/NL/LT), DCR also recommends continued coordination with VDGIF and USFWS to ensure compliance with protected species legislation. DCR request copies of the field survey results.

Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on these survey reports.

Sincerely,

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

S. René Hypes  
Project Review Coordinator

CC: Troy Anderson, USFWS  
Ernie Aschenbach, VDGIF





February 15, 1982

To: (b) (6)  
From: Dr. Gary Nussbaum  
Re: Canoe Cave Management Plan

I. Results of the 7 February 1982 biological and geological survey of Canoe Cave.

- A. Estimated total bat population: 300-350 bats.
- B. Bats actually counted:
  - 1. myotis lucifugus (little brown bats): 112
  - 2. pipistrellus subflavus (Eastern pipistrelle) 150
  - 3. myotis keenii (rare in this area) 1
  - total 263
- C. Troglobitic millipedes were found on some pieces of old, wet wood (before the "canoe"), probably trichopetalum packardii.
- D. Another millipede was spotted next to a bat (probably pseudotremia species).
- E. There were many fragile and beautiful formations, including the "Finger of God" (a stalagmite), the "The Prophets" (a cluster of stalagmites), and rare aragonite helictites (miniature tree-like formations).
- F. There were some old signatures dating back to the late 1800's.
- G. Although "elephant tracks" were evidenced, the cave was seen to have born relatively little traffic and and damage over the years and to be, at present, in a relatively untrammelled state. It was felt that few caves in Giles County (or in Virginia, for that matter) were in as good condition as Canoe.

II. Canoe Cave Management Plan. Given the above findings and after numerous discussions with both (b) (6) and Dr. Ginny Tipton of the Cave Commission of the Commonwealth of Virginia, the following cave management plan is recommended for the protection of the cave:

- A. The cave should be closed completely during the winter bat hibernation period (approx. November 1-March 31).
- B. During the nonhibernation period (approx. April 1-October 31), trips to the cave should be restricted as follows:
  - 1. no more than one (1) trip per month.
  - 2. no more than five (5) persons per trip, one of whom is both familiar with and sensitive to the delicate nature of the cave (for example, Dr. Tipton).
  - 3. biological, geological, historical, and aesthetic study must be the primary purpose of the trip.
  - 4. those desiring entry must submit a written request including the nature of the trip, the number of persons, the dates and times, and the names of group members.
  - 5. (b) (6) will forward the request to Dr.'s Nussbaum and Tipton who will review it, consult with her about the request, and make the appropriate arrangements.