

From: [Orndorff, Wil \(DCR\)](#)
To: [Bulluck, Jason \(DCR\)](#); [Reynolds, Rick \(DGIF\)](#); [Smith, Thomas \(DCR\)](#); [Hoskin, Sumalee](#)
Cc: [Hobson, Chris \(DCR\)](#); [Hypes, Rene \(DCR\)](#)
Subject: RE: Mountain Valley Pipeline - Canoe Cave Northern Bat Record
Date: Thursday, December 17, 2015 5:57:01 PM
Attachments: [Northern bat Canoe Cave MVP.docx](#)

Attached is my first attempt.

Please input and we can revise.

Wil

From: Bulluck, Jason (DCR)
Sent: Thursday, December 17, 2015 12:07 PM
To: Orndorff, Wil (DCR); Reynolds, Rick (DGIF); Smith, Thomas (DCR); Hoskin, Sumalee
Cc: Hobson, Chris (DCR); Hypes, Rene (DCR)
Subject: RE: Mountain Valley Pipeline - Canoe Cave Northern Bat Record

Wil,

Can you please start us off by drafting the documentation? It seems that citing therein, FWS stipulations, would communicate the issue best, but if this holds this up longer, then I think it should refer MVP and FERC to FWS staff. I am not sure what this entails, exactly. Sumalee, can you help with this part?

With this, we can share draft with Ray Fernald and get to a final that we can share with Clyde Cristman for review before providing to FERC and MVP.

Rene', would you please give Ray a heads up about this, so he is looking for it when we send it?

Thank you,

Jason

From: Orndorff, Wil (DCR)
Sent: Thursday, December 17, 2015 10:51 AM
To: Reynolds, Rick (DGIF); Smith, Thomas (DCR); Hoskin, Sumalee
Cc: Hobson, Chris (DCR); Bulluck, Jason (DCR)
Subject: RE: Mountain Valley Pipeline - Canoe Cave Northern Bat Record

So we need to either cite what FWS stipulations are for NLEB hibernacula avoidance, or direct MVP and FERC to the appropriate FWS staff. The documentation part is simple – we cite the record and explain that it was not part of the state database prior to meeting with the property owner, but we believe the record to be valid based on the reporting party (Dr. Gary Nussbaum, Radford University, in conjunction with Dr. Jenny Tipton).

Thoughts?

Wil

From: Reynolds, Rick (DGIF)
Sent: Thursday, December 17, 2015 10:47 AM
To: Smith, Thomas (DCR); Orndorff, Wil (DCR); Hoskin, Sumalee
Cc: Hobson, Chris (DCR); Bulluck, Jason (DCR)
Subject: RE: Mountain Valley Pipeline - Canoe Cave Northern Bat Record

You should include Ray Fernald in this discussion as it will be "his shop" that formulates DGIF comments. Thanks

Rick

From: Smith, Thomas (DCR)
Sent: Thursday, December 17, 2015 10:29 AM
To: Orndorff, Wil (DCR); Hoskin, Sumalee
Cc: Hobson, Chris (DCR); Reynolds, Rick (DGIF); Bulluck, Jason (DCR)
Subject: RE: Mountain Valley Pipeline - Canoe Cave Northern Bat Record

I think, we should do a coordinated response from DCR and DGIF that will go up the chain for approval and then to MVP and FERC; and the Service using similar/same language do their notification.

Tom Smith

www.dcr.virginia.gov

Acting Operations Deputy Director
VA Dept of Conservation and Recreation
600 East Main Street, Richmond, VA
(804) 786-4554

From: Orndorff, Wil (DCR)
Sent: Thursday, December 17, 2015 10:18 AM

To: Hoskin, Sumalee
Cc: Hobson, Chris (DCR); Reynolds, Rick (DGIF); Smith, Thomas (DCR); Bulluck, Jason (DCR)
Subject: RE: Mountain Valley Pipeline - Canoe Cave Northern Bat Record

We need to alert FERC and MVP to this ASAP in my opinion. How do we do this, and who will do this? The clock is ticking and I don't want this to be any more of a surprise to them than it already will be. This could be a major roadblock to their preferred corridor.

Wil

From: Hoskin, Sumalee [mailto:sumalee_hoskin@fws.gov]
Sent: Tuesday, December 08, 2015 4:53 PM
To: Orndorff, Wil (DCR)
Cc: Hobson, Chris (DCR); Reynolds, Rick (DGIF); Smith, Thomas (DCR); Bulluck, Jason (DCR)
Subject: Re: Mountain Valley Pipeline - Canoe Cave Northern Bat Record

Wil,

Thanks for bringing this to our attention. I think the record should be treated as a documented NLEB hibernacula. I'd like to ensure all agencies are consistent. Rick, Chris please weigh in. If we all agree it should be considered a NLEB hibernacula can I have the coordinates so we can get it into our database, or would Jason provide a VDGIF update?
Thanks,

Sumalee

Sumalee Hoskin
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Visit us at <http://www.fws.gov/northeast/virginiafield/>

On Tue, Dec 8, 2015 at 4:38 PM, Orndorff, Wil (DCR) <Wil.Orndorff@dcr.virginia.gov>
wrote:
Dear colleagues,

I may have related this to you earlier, but just in case.

There is a February 7, 1982 record (Radford University, Gary Nussbaum – and presumably Jenny Tipton-Dalton) of a Northern bat (*M. septentrionalis*, formerly grouped with *M. keenii*) for Canoe Cave. This was a winter hibernacula record. Correspondence is attached.

Canoe Cave lies directly beneath the proposed MVP Gas Transmission Line centerline as submitted by MVP to FERC.

Regulatory agencies (FWS, DGIF) need to decide ASAP how to treat this record for purposes of the pipeline. The owner is aware of the record and its associated legal status.

Thanks,

Wil

Memorandum

From: Wil Orndorff, VA-DCR Karst Protection Coordinator

To: Ray Fernald (VA-DGIF), Rene Hypes (VA DCR-DNH), Sumalee Hoskin (US – FWS)

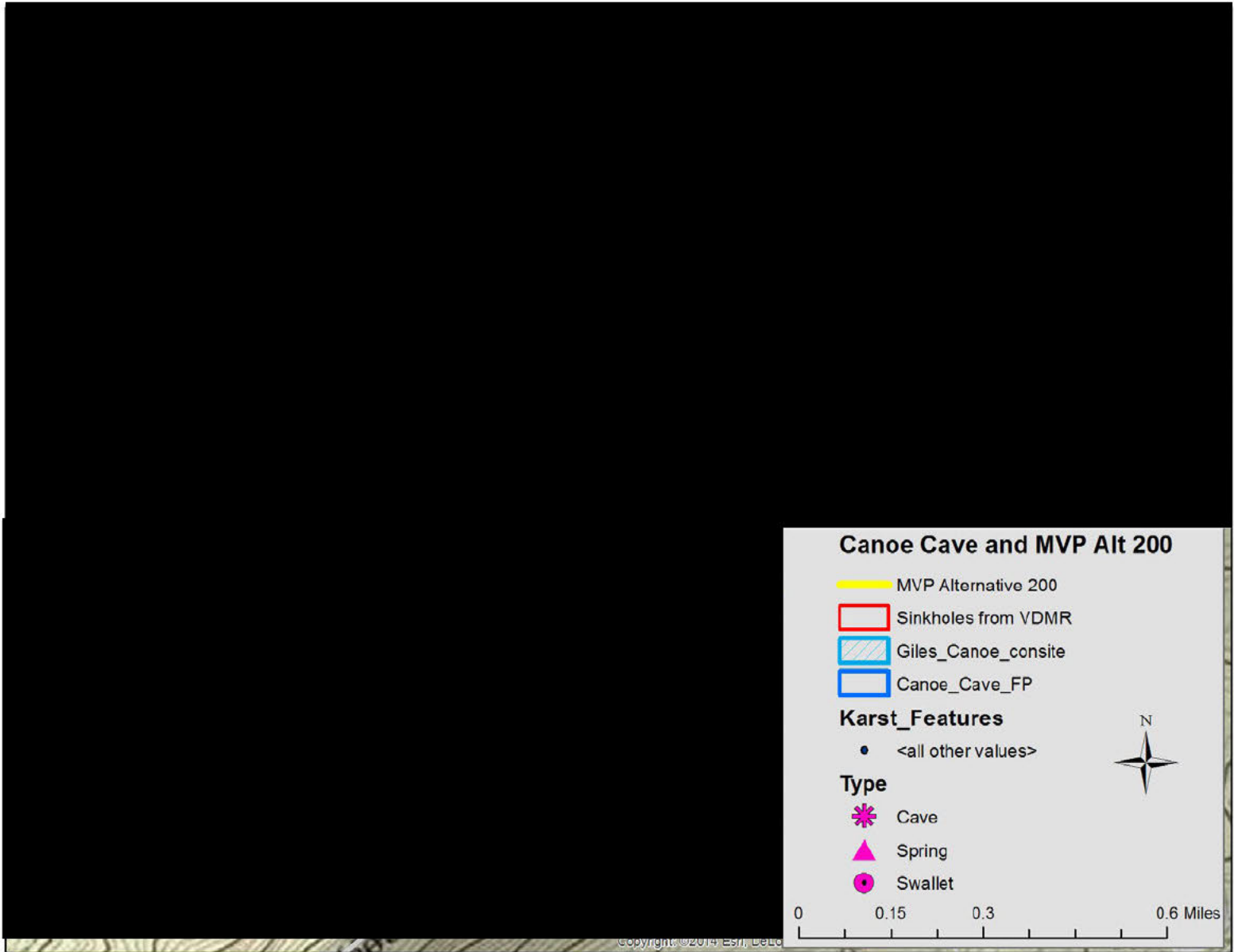
CC: Jason Bulluck (DCR-DNH), Chris Hobson (DCR-DNH), Tom Smith (DCR Deputy Director), Rick Reynolds (VA-DGIF)

RE: Record of Federally threatened *Myotis septentrionalis* (Northern bat) from Canoe Cave, Giles County.

Department of Conservation and Recreation 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. Subsequent to the visit, [REDACTED], which owns the cave, shared with DCR staff copy of correspondence to former owner [REDACTED]. [REDACTED]. Nussbaum worked in conjunction with Radford University mammalogist Dr. Jenny Tipton, who pioneered the study of Virginia's cave bats. This 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 bat). *Myotis septentrionalis* was listed as threatened under the US Endangered Species Act in 2015, 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 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.

The geographic relationships between the cave entrance, the resurgence spring to which water from the cave flows, the conservation site (i.e. conservation buffer), and the proposed pipeline corridor are shown in the map figure. The conservation buffer is based on geological patterns, topography, hydrological flow paths (inferred), and karst features. Detailed hydrological investigations would be necessary to determine the northeast and southwestern boundaries of the site.





February 15, 1982

To: Mrs. (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. Troglotic 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 Mrs. (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. Nussbaum and Tipton who will review it, consult with her about the request, and make the appropriate arrangements.