

From: [Stahl, Megan D.](#)
To: [Cindy Schulz](#); [Barbara Douglas](#); [Lennon, Tiernan](#); [Sumalee Hoskin](#)
Cc: [Centofanti, John](#)
Subject: MVP Potential Hibernacula References, Locations, Photos
Date: Friday, October 27, 2017 2:01:24 PM
Attachments: [Bat_Poten_Hiber_2017_1023_DAA.KMZ](#)
[Draper Aden Karst Specialist Quals 10-27.pdf](#)
[2017_10_27-MVP Potential_Hib_Within_Action_Area-with cave descriptions and references.xlsx](#)

All,

I am providing the following to aid in your review of the assessments of the potential hibernacula:

1. Updated table with references added (attached). Please note I added clarification to column headers and included the screening criteria in the footnotes.
2. Qualifications for references (attached).
3. KMZ showing the locations of the potential hibernacula (attached).
4. ArcGIS ArcMap Document that will allow you to page through the caves using data driven pages. This format shows the cave locations and any photos that are associated with the cave entrance (instructions to download the files below).

The files can be downloaded here:



Click the above link, save the .zip file to a folder on your PC, right click the file and choose "Extract All" from the menu, enter the password below and your file(s) will be uncompressed to a folder for you.

Password to extract contents of .zip file – 

Please note that the PDF file shows an "example" of what the recipient can obtain as output from the KMZ. It does not cover all features. Please let me know if you have any questions.

Megan Stahl
Permitting Supervisor
625 Liberty Avenue, Suite 1700
Pittsburgh, PA 15222
T 412-553-7783
C 412-737-2587



2206 South Main Street
Blacksburg, Virginia 24060
(540) 552-0444 • Fax (540) 552-0291
www.daa.com

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Karst Specialist Team

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Feature Name	featureid	State	County	Portal Opening ID	Suitability as Documented in the BA	Indiana Bat Status as Documented in the BA	Northern Long-eared Bat Status as Documented in the BA	Distance to LOD as Documented in the BA (meters)	Actual Distance to LOD based on Reference(s) in Column R (meters)	Cave Length based on Reference(s) in Column R (feet)	Closest Feature within LOD	Topographic setting/ gradient based on Reference(s) in Column R	Cave Description based on Reference(s) in Column R	Suitability based on Physical Details*	Potential for Construction Impact**	Basis for determinations	Cave Data References***
	VA-0129	Virginia	Giles		Suitable	Not Occupied	Known			3388	Access Road	Cave is uphill from route and AR		Suitable	No	no impact based on hydrologic and geologic analysis, addressed in BA	Douglas, Holsinger, DAA Karst Team
	VA-0134	Virginia	Giles		Suitable	Known	Known			3980	ROW	On hillside opposite side Rd and Creek from LOD. Hydrologically upgradient.		Suitable	No	no impact based on hydrologic and geologic analysis, addressed in BA	Douglas, Holsinger, DAA Karst Team
	VA-0136	Virginia	Montgomery		Suitable	Suitable, Unsurveyed	Suitable, Unsurveyed			215	ROW	Sideways two draws southwest.		Suitable	No	no impact based on outside of 0.5-mile buffer	Douglas, DAA Karst Team
	VA-0259	Virginia	Giles		Suitable	Suitable, Unsurveyed	Suitable, Unsurveyed			9000	Access Road	The limestone mine intersected a cave some distance into the mine and subsequently portions of the cave were quarried away.		Suitable	No	no impact based on existing access that will only be used for light truck traffic	Virginia Speleological Survey, DAA Karst Team
	WV-0055	West Virginia	Braxton		Suitable	Not Occupied	Known			60	ROW	40 degree slope on wooded hillside		Suitable	Potential		ESI Field Review
	VA-0260	Virginia	Giles		Suitable	Suitable, Unsurveyed	Suitable, Unsurveyed				Access Road			Suitable	No	no impact based on existing access that will not be upgraded and will only be used for light truck traffic	ESI Field Review
	VA-0261	Virginia	Giles		Suitable	Suitable, Unsurveyed	Suitable, Unsurveyed				Access Road			Suitable	No	no impact based on existing access that will not be upgraded and will only be used for light truck traffic	ESI Field Review
		West Virginia	Nicholas		Suitable	Suitable, Unsurveyed	Suitable, Unsurveyed			60	Access Road			Suitable	No	no impact based on existing access that will not be upgraded	ESI Field Review
	VA-0199	Virginia	Giles		Unknown	Suitability Unknown	Suitability Unknown		840	437	ROW	On opposite hill		Potential	No	no impact based on entrance outside 0.5-mile buffer, closest passage is 0.44-mile	Virginia Speleological Survey, DAA Karst Team
	VA-0141	Virginia	Montgomery		Unknown	Suitability Unknown	Suitability Unknown		786	1323	ROW	Downgradient		Potential	No	no impact based on distance 0.49-mile from LOD and trend away	Douglas, DAA Karst Team
	VA-0194	Virginia	Giles		Unknown	Suitability Unknown	Suitability Unknown		721	500	Access Road	On flank of mountain across creek, road, and US-460. Upgradient.		Potential	No	no impact based on topography upgradient on ridge on different mountain across road and stream	Douglas, Holsinger
	VA-0142	Virginia	Montgomery		Unknown	Suitability Unknown	Suitability Unknown		643	503	Access Road	Sideways across a ridge and draw.		Potential	No	no impact based on topography across a ridge	Virginia Speleological Survey, DAA Karst Team
	VA-0133	Virginia	Giles		Unknown	Suitability Unknown	Suitability Unknown		499	6230	ROW	Upgradient		Potential	No	no impact based on upgradient and trends away	Douglas, Holsinger, DAA Karst Team
	VA-0245	Virginia	Giles		Unknown	Suitability Unknown	Suitability Unknown		474	85	Access Road and ROW	Sideways far along the mountain.		Potential	No	no impact based on distance to single pit, no trend	Douglas
	VA-0250	Virginia	Giles		Unknown	Suitability Unknown	Suitability Unknown		408	1530	ROW	Upgradient, across creek, over a hill.		Potential	No	no impact based on upgradient and distance to end of cave	Holsinger, DAA Karst Team
	VA-0159	Virginia	Montgomery		Unknown	Suitability Unknown	Suitability Unknown		257	135	Access Road	Other side of draw from AR.		Potential	No	no impact based on topography and trend away from AR	Virginia Speleological Survey, DAA Karst Team
	VA-0140	Virginia	Montgomery		Unknown	Suitability Unknown	Suitability Unknown		104	600	ROW	In hillside above Route.		Potential	No	no impact based on upgradient and distance to end of cave	Douglas, DAA Karst Team
	VA-0131	Virginia	Giles		Unknown	Suitability Unknown	Suitability Unknown		38	208	Access Road	Downslope from existing gravel driveway.		Potential	No	no impact based on trend parallel to existing access road	Holsinger
	VA-0238	Virginia	Montgomery		Unknown	Suitability Unknown	Suitability Unknown							Potential	No	no impact based on outside of 0.5-mile buffer	ESI, DAA Karst Team
	VA-0147	Virginia	Montgomery		Unknown	Suitability Unknown	Suitability Unknown							Outside Action Area	No	outside of 0.5-mile buffer	Douglas
	VA-0217	Virginia	Giles		Unknown	Suitability Unknown	Suitability Unknown		940	25	Access Road and ROW	Upgradient		No	N/A	no impact based on outside of 0.5-mile buffer, upgradient, not suitable based on cave length	Virginia Speleological Survey, DAA Karst Team
	VA-0151	Virginia	Montgomery		Unknown	Suitability Unknown	Suitability Unknown		937	46	Access Road	On low ridge		No	N/A	outside of 0.5-mile buffer	Virginia Speleological Survey, DAA Karst Team
	VA-0231	Virginia	Giles		Unknown	Suitability Unknown	Suitability Unknown		905	45	Access Road	Other side of hill, down the ridge.		No	N/A	outside of 0.5-mile buffer	Virginia Speleological Survey
	WV-0064	West Virginia	Monroe		Unknown	Suitability Unknown	Suitability Unknown		895	20	ROW	Upgradient a couple draws easterly		No	N/A	no impact based on outside of 0.5-mile buffer, upgradient, not suitable based on cave length	Hempel
	VA-0138	Virginia	Montgomery		Unknown	Suitability Unknown	Suitability Unknown		889	272	ROW	Surface - downgradient of route, subsurface - upgradient of route		No	N/A	outside of 0.5-mile buffer	Douglas, Virginia Speleological Survey, DAA Karst Team
	VA-0149	Virginia	Montgomery		Unknown	Suitability Unknown	Suitability Unknown		881	250	ROW	Sideways toward next hill, across road		No	N/A	no impact based on outside of 0.5-mile buffer, not suitable based on entrance and likely filled	Douglas, DAA Karst Team
	VA-0235	Virginia	Giles		Unknown	Suitability Unknown	Suitability Unknown		869	0	ROW	On other side of hill		No	N/A	no impact based on outside of 0.5-mile buffer, not suitable based on length	Virginia Speleological Survey
	VA-0214	Virginia	Giles		Unknown	Suitability Unknown	Suitability Unknown		862	25	Access Road and ROW	Upgradient		No	N/A	no impact based on outside of 0.5-mile buffer, upgradient, not suitable based on cave length	Virginia Speleological Survey, DAA Karst Team

- 2. Trend away from LOD
- 3. Topographic setting/gradient
- 4. Hydrology
- 5. Specific construction activities in proximity to feature

***References:

DAA (Draper Aden Associates) Karst Team (qualifications attached):
Bill Balfour – Professional Geologist, karst and natural resource focus. 45 years experience cave and karst mapping and research. West Virginia and Virginia Speleological Survey.
Mike Futrell – Geospatial Analyst, geology, environment, utility focus. 35 years experience cave and karst mapping and research. Virginia Speleological Survey.

Douglas, Henry H. (1964). Caves of Virginia. Virginia Cave Survey, Falls Church, Virginia. 761 p.

Hempel, John C. (1975). Caves and Karst of Monroe County, W.Va. West Virginia. Speleological Survey Bulletin 4. Pittsburgh, Pennsylvania.

Holsinger, John R. (1975). Descriptions of Virginia Caves. Bulletin No. 85. Virginia Division of Mineral Resources, Charlottesville, Virginia.



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Canoe Cave	VA-0129	V g n a	G les	Canoe Cave	Su table	Not Occup ed	Known	Known	275.009522	276	3388	Access Road	Cave s ugh f om outh and AR	2x3' ent ance n small steep s hole. La ge steeply slop ng ooms. D y. No a flow. Hy d olog cally upg ad ent.	Su table	No	no impact based on hyd olog c end geolog c analysis, add exped n BA	Douglas, Hol nge , DAA Ka st Team
Tawneys Cave E3	VA-0134	V g n a	G les	VA-0134-3	Su table	Known	Known	Known	39.796908	72	3980	ROW	On h lls de oppo te s de Rd and C eek f om LOD. Hy d olog cally upg ad ent.	3 ent ances, ve y popula ec eat onal cave. La ge open spaces, st eam, a flow. Ent s c awl-gated, 5x3-gated, walk-n sk ent - not gated s s the f om LOD. Oppo te Rd and C eek f om LOD. T ends away.	Su table	No	no impact based on hyd olog c end geolog c analysis, add exped n BA	Douglas, Hol nge , DAA Ka st Team
F ed Bulls Cave	VA-0136	V g n a	Montgome y	F ed Bu ls Cave	Su table, Unsu veyed	Su table, Unsu veyed			654.627275	927	215	ROW	5 deways two d awes southwest.	5 nkhole nte sects a "ka st ndown". Passage cont nued downst eam d m sh ng n s s e to a g awel choke. T ends away.	Su table	No	no impact based on outs de of 0.5-m-le bu fe	Douglas, DAA Ka st Team
K mbalton M ne Cave	VA-0259	V g n a	G les	MKM-PO-001	Su table, Unsu veyed	Su table, Unsu veyed			27.16238	18	9000	Access Road	The l mestone m ne rte secte d cave some d stance into the m ne and subsequently po tions of the cave we e equ ed away.	The m ne po tal has a la ge steel doo . Th s locat on s the m ne ent ance doo . La ge cave, when v s ted (1980s) all su faces we e coated w th ck black soot.	Su table	No	no impact based on ex st ng access that w ll only be used fo ght t uck t off c	V g n a Speleolog cal Su vey, DAA Ka st Team
PS-WV3-Y-P1	WV-0055	West V g n a	B anton	PS-WV3-Y-P1	Su table	Not Occup ed	Known	Known	7.796084		60	ROW	40 deg ee slope on wooded h lls de	3' x 6' open ng, 4' x 8' nte o . Ent ance and nte nal ce ng appea ed stable use of po tal would not make bats suscept ble to p edat on. Old log ng oad nce by. ~ 100 m f om yall w th Kanawha R ve	Su table	Potent al		ESI F ed Rev ew
MKM-PO-002	VA-0260	V g n a	G les	MKM-PO-002	Su table, Unsu veyed	Su table, Unsu veyed			57.330464			Access Road	Located on ex st ng m ne s nea an Access Road. P obably Assoc ated w th K mbal ton M ne		Su table	No	no impact based on ex st ng access that w ll not be upg aded and w ll only be used fo ght t uck t off c	ESI F ed Rev ew
MKM-PO-003	VA-0261	V g n a	G les	MKM-PO-003	Su table, Unsu veyed	Su table, Unsu veyed			64.752073			Access Road	located on ex st ng m ne s nea an Access Road. P obably Assoc ated w th K mbal ton M ne		Su table	No	no impact based on ex st ng access that w ll not be upg aded and w ll only be used fo ght t uck t off c	ESI F ed Rev ew
MVP-NI-151.02		West V g n a	N cholas	MVP-NI-151.02	Su table, Unsu veyed	Su table, Unsu veyed			67.22		60	Access Road	Lkely leads back to coal m ne rume ous m ne ad ts p esent allow ng fo d a nage th d open ng s gated culve t		Su table	No	no impact based on ex st ng access that w ll not be upg aded	ESI F ed Rev ew
McDonalds Cave	VA-0199	V g n a	G les	VSS-279101	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		839.030526	840	437	ROW	On oppo te h lls	An ent ance passage leads to a 9-nch x 2-ft sqeere where e bats may be suscept ble to p edat on. The cave cont nues as p t, t ght c awl, and canyon. T ends tows d. Nea ent passage s 2300-ft away.	Potent al	No	no impact based on ex st ng out s de of 0.5-m-le buffe , closest passage s 0.64-m-le	V g n a Speleolog cal Su vey, DAA Ka st Team
M l C eek Cave	VA-0141	V g n a	Montgome y	VA-0141-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		785.851482	786	1323	ROW	Downg ad ent	2 x2' ent ance above sp ng leads to a st eam passage. T ends away.	Potent al	No	no impact based on d stance 0.49-m-le f om LOD and t end away	Douglas, DAA Ka st Team
Sp uce Run Mounta n Cave	VA-0194	V g n a	G les	VSS-239501	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		720.408081	723	500	Access Road	On flank of mounta n ac oss c eek, oad, and US-460. Upg ad ent.	A c awl / st eam c awl leads to a fo mat on oom. T end pa allel.	Potent al	No	no impact based on topog aphy upg ad ent on dge on d flle ent mounta n ac oss oad and st eam	Douglas, Hol nge
Thompsons Cave	VA-0142	V g n a	Montgome y	VA-0142-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		642.762047	643	503	Access Road	5 deways ac oss a dge and d ase.	Cave s a se es of passages and canyons. D y. No a flow. T ends no thweste ly, sl ghtly away.	Potent al	No	no impact based on topog aphy ac oss a dge	V g n a Speleolog cal Su vey, DAA Ka st Team
P hole Cave	VA-0133	V g n a	G les	VA-0133-2	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		499.548032	499	6230	ROW	Upg ad ent	2 ent ances, popula ec eat onal cave w th la ge ooms, passages and p ts. T ends away.	Potent al	No	no impact based on upg ad ent and t ends away	Douglas, Hol nge , DAA Ka st Team
Kanodens P t	VA-0245	V g n a	G les	VSS-133901	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		474.08498	474	85	Access Road and ROW	5 deways fa along the mounta n.	85' open a g t w th oom at bottom. Ve y popula ec eat onal cave. Typ cal passage s c awls and cl mbs between sma l ooms, and no ow fts. T ends tows d, ent cave s about 1200' away.	Potent al	No	no impact based on d stance to s ght p t n t end	Douglas
L nks Cave	VA-0250	V g n a	G les	VSS-142301	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		336.734631	408	1530	ROW	Upg ad ent, ac oss c eek, ent, a h lls	Ent ance s squeeze between boudle s n sma l n k n cow pastu e. Small cave. D y. No a flow. T ends SW away f om AR.	Potent al	No	no impact based on topog aphy and t end away f om AR	V g n a Speleolog cal Su vey, DAA Ka st Team
Unnamed (Lost A ow Cave aka Hancock)	VA-0159	V g n a	Montgome y	VA-0159-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		257.484228	257	135	Access Road	Onhe s de of d aw f om AR.	Cave s a s ghtle small na ow st a ght passage w th a st eam. T ends east, n t ally pa allel. Then app each ng after a bend n the g ad ne. Cave end's closest po nt to outh s about 700'	Potent al	No	no impact based on upg ad ent and d stance to end of cave	Douglas, DAA Ka st Team
Johnsons Cave	VA-0140	V g n a	Montgome y	VA-0140-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		123.304616	104	600	ROW	In h lls de above Route.		Potent al	No	no impact based on upg ad ent and d stance to end of cave	Douglas, DAA Ka st Team
Jones Cave	VA-0131	V g n a	G les	VA-0131-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		38.321999	38	208	Access Road	Downslope f om ex st ng g awel d veyary.	The ent ance nte sect a s ghtle passage unn ng along the h lls de. NE-SW f om ent ance pa allel to h lls de and g awel d ve.	Potent al	No	no impact based on t end pa allel to ex st ng access, add	Hol nge
Unnamed	VA-0238	V g n a	Montgome y	VA-0238-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		906.26135						Potent al	No	no impact based on outs de of 0.5-m-le bu fe	ESL, DAA Ka st Team
Longs Cave No.2	VA-0147	V g n a	Montgome y	VA-0147-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		734.164703						Outs de Act on A es	No	outs de of 0.5-m-le buffe	Douglas
W ndso P t	VA-0217	V g n a	G les	VSS-359001	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		941.306162	940	25	Access Road and ROW	Upg ad ent	1.5'x2.5' open a p t.	No	N/A	no impact based on outs de of 0.5-m-le bu fe , upg ad ent, not su table based on cave length	V g n a Speleolog cal Su vey, DAA Ka st Team
Bob Henden son Cave	VA-0151	V g n a	Montgome y	VA-0151-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		936.734077	937	46	Access Road	On low dge	Sma l bend ng planes and f sou es. Obv ous use as an mal den.	No	N/A	outs de of 0.5-m-le buffe	V g n a Speleolog cal Su vey, DAA Ka st Team
Co lsc ew Cave	VA-0231	V g n a	G les	VSS-406201	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		904.62062	905	45	Access Road	Onhe s de of h lls, down the dge.	T ght open a p t.	No	N/A	outs de of 0.5-m-le buffe	V g n a Speleolog cal Su vey
Wolf Cave	WV-0064	West V g n a	Mon oe	WV-0064-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		895.328692	895	20	ROW	Upg ad ent a couple d awes ente ly	A small cave n a nkhole tak ng a st eam.	No	N/A	no impact based on outs de of 0.5-m-le bu fe , upg ad ent, not su table based on cave length	Hempel
Ba lls s Cave	VA-0138	V g n a	Montgome y	VA-0138-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		888.6771	889	272	ROW	Su face - downg ad ent of outh, subru face - upg ad ent of outh	A small swa let cave, floods, f fled w th gan c deb s. C awl max, no t end.	No	N/A	outs de of 0.5-m-le buffe	Douglas, V g n a Speleolog cal Su vey, DAA Ka st Team
M l C eek P t	VA-0149	V g n a	Montgome y	VSS-164701	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		53.527479	883	250	ROW	5 deways tows d next h lls ac oss oad	P t cave, lkely f lled. Could not be found.	No	N/A	no impact based on outs de of 0.5-m-le bu fe , not su table based on ent ance and lkely f lled	Douglas, DAA Ka st Team
T ap Doo Cave	VA-0235	V g n a	G les	VSS-419601	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		868.739332	869	0	ROW	On the s de of h lls	2 x3' ent ance n s de of st eam bed. No the nfo.	No	N/A	no impact based on outs de of 0.5-m-le bu fe , not su table based on length	V g n a Speleolog cal Su vey
F eeman Hole	VA-0214	V g n a	G les	VSS-357801	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		862.941664	862	25	Access Road and ROW	Upg ad ent	3 x7' open a p t.	No	N/A	no impact based on outs de of 0.5-m-le bu fe , upg ad ent, not su table based on cave length	V g n a Speleolog cal Su vey, DAA Ka st Team
Slusse s Chapel Cave	VA-0137	V g n a	Montgome y	VA-0137-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		165.005676	853	5400	ROW	Downg ad ent	2 x2' ent ance at the end of a la ge r nkhole/dole ne leads to a long cave cons st ng of canyon passages. The cave d s much of the Mt Tabo a ea and floods du gh gh wate . T ends away.	No	N/A	no impact based on outs de of 0.5-m-le bu fe , upg ad ent, not su table based on flood ng	Douglas, Hol nge , DAA Ka st Team
Doe Mounta n Cave	VA-0210	V g n a	G les	VSS-349701	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		843.539132	843	14320	ROW	Upg ad ent of outh.	La ge deep cave dug open by cave s. Small c awl ent ance s pe ed only washed shut w th g awel and cave s d g t back open app n.	No	N/A	no impact based on outs de of 0.5-m-le bu fe , upg ad ent, not su table based on flood ng and co lusse	V g n a Speleolog cal Su vey, DAA Ka st Team
Key R dge Cave	VA-0246	V g n a	G les	VSS-136601	Unknown	Su tab l ty Unknown	Su tab l ty Unknown		841.299838	842	400	ROW	Downg ad ent.	Old epo t of a cave dug open and subsequently f lled n by flood deb s.	No	N/A	no impact based on outs de of 0.5-m-le bu fe , not su table based on f lled	Douglas

And ewe Cave	VA-0169	V g n a	G les	VSS-3201	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	777.032433	822	40	ROW	Upp ad ent	A small passage	No	N/A	no impact based on outs de of 0.5-m le bu fe , upg ad ent, not su table based on cave length	Douglas, V g n a Speleolog cal Su vey
Chockstone P t	VA-0230	V g n a	G les	VSS-406101	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	815.051572	816	40	Access Road	On the s de of h ll, down the dge	T ght open a p t	No	N/A	no impact based on outs de of 0.5-m le bu fe , topog aphy, not su table based on length	V g n a Speleolog cal Su vey
F eeman T eestand Cave	VA-0218	V g n a	G les	VSS-359101	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	757.734912	757	10	ROW	Upp ad ent	T ght c awl n s nkhole	No	N/A	not su table based on cave length and surface p t	V g n a Speleolog cal Su vey, DAA Ka st Team
Pe te f elds Cave	VA-0145	V g n a	G les	VA-0145-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	716.328452	716	55	ROW	Upp ad ent	L nes open a p t f su e on h ls de	No	N/A	not su table based on su face p t	Douglas, V g n a Speleolog cal Su vey, DAA Ka st Team
Ga dne s L ttle Cave	VA-0182	V g n a	Montgome y	VSS-96201	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	658.822763	659	15	ROW	Upp ad ent	A small passage	No	N/A	not su table based on cave length	Douglas, V g n a Speleolog cal Su vey
Just a L ttle Fa the Cave	VA-0234	V g n a	G les	VSS-419501	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	638.908784	639	12	ROW	On other s de of h ll	2 x3 open a p t next to st eam	No	N/A	not su table based on cave length	V g n a Speleolog cal Su vey
Small Room Cave	VA-0146	V g n a	G les	VA-0146-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	593.305704	636	8	ROW	Upp ad ent	A small oom	No	N/A	not su table based on ent ance and cave length	V g n a Speleolog cal Su vey, DAA Ka st Team
Hancock Blowhole	VA-0158	V g n a	Montgome y	VA-0158-2	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	557.095487	630	50	Access Road	S deways a couple dgers and d aw f om AR	A t ght open a p t lead ng to a t ght f ssu e	No	N/A	not su table based on ent ance	V g n a Speleolog cal Su vey, DAA Ka st Team
Kn pl ng Slot Cave	VA-0225	V g n a	G les	VSS-382001	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	600.942355	600	15	ROW	S deways ac oss a small saddle, on next dge	A small f ssu e	No	N/A	not su table based on cave length	V g n a Speleolog cal Su vey, DAA Ka st Team
Pedle H ls Cave	VA-0220	V g n a	Montgome y	VSS-366401	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	585.843779	587	20	Access Road	Locat on unce ta n	Vague epp t of a small cave	No	N/A	not su table based on cave length	V g n a Speleolog cal Su vey
Ma oon Canyon Cave	VA-0215	V g n a	G les	VSS-358801	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	559.356066	559	92	Access Road and ROW	Upp ad ent	3 x15 open a p t. No passage. No a flow	No	N/A	no impact based on upg ad ent, not su table based on su face and no a flow	V g n a Speleolog cal Su vey, DAA Ka st Team
F eeman P t	VA-0216	V g n a	G les	VSS-358901	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	552.095319	551	135	Access Road and ROW	Upp ad ent	3 x4 open a p t. No passage. No a flow	No	N/A	no impact based on upg ad ent, not su table based on su face and no a flow	V g n a Speleolog cal Su vey, DAA Ka st Team
Bob Herde son P t	VA-0209	V g n a	Montgome y	VSS-347501	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	522.845013	524	60	ROW	On oppo te h ll ac oss low saddle	2 x3 open a p t, no passage. D y. No a flow	No	N/A	not su table based on su face p t and now a flow	V g n a Speleolog cal Su vey, DAA Ka st Team
Te ble To to se Cave	VA-0219	V g n a	G les	VSS-365401	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	480.671727	480	650	Access Road and ROW	Upp ad ent	1 x2 ve t cal f ssu e ent ance leads to a se es of ve y t ght p ts, l ttle ho zontal development. The f st shaft s ve y t ght and n a waste f l	No	N/A	no impact based on upg ad ent, not su table based on flood ng	V g n a Speleolog cal Su vey, DAA Ka st Team
Smokehole Cave	VA-0135	V g n a	G les	VA-0135-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	405.734535	461	9343	ROW	Upp ad ent	2 ent ances, popula ec eat onal cave. Sp ent ance s flooded n wet weather. Typ cal passage s low st eam passages w th a few ooms. Du ng gh water la ge po t ons of the cave flood. T ends away	No	N/A	no impact based on upg ad ent and s ends away, not su table based on flood ng	Douglas, DAA Ka st Team
R ch C eek Cave	WV-0056	West V g n a	Mon oe	WV-0056-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	452.914765	459	1607	ROW	Downg ad ent of outh	Ent ance sumped du ng wet weather. Deep water st eam cave w th ooms. T ends sl ghtly towa d end of cave s app ox 1230 feet away f om LOD.	No	N/A	no impact based on d stance to end of cave, not su table based on flood ng	Hempel, WV-0056, DAA Ka st Team
Conkl n A Hole	VA-0232	V g n a	G les	VSS-411201	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	439.889174	439	0	ROW	Ac oss a d aw and upg ad ent	A small blowhole noted n bed cck	No	N/A	not su table based on ent ance and cave length	V g n a Speleolog cal Su vey, DAA Ka st Team
K mbakon Cave	VA-0221	V g n a	G les	VSS-381501	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	348.980912	348	25	ROW	Upp ad ent	A s ng le 25-ft long passage	No	N/A	not su table based on cave length	V g n a Speleolog cal Su vey, DAA Ka st Team
J mzuthe Cave	VA-0242	V g n a	G les	VSS-130701	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	303.734399	341	87	ROW	Upp ad ent, ac oss c eek, over a h ll	W de low c awl up above c eek level. No a flow. Floods n wet weather. T ends towa d	No	N/A	not su table based on flood ng	V g n a Speleolog cal Su vey, DAA Ka st Team
Bobcat Cave	WV-0057	West V g n a	Mon oe	WV-0057-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	321.028081	321	15	ROW	S deways f om outh, locat on unce ta n	A small oom	No	N/A	not su table based on cave length	Hempel
M ss ng Lnk Cave	VA-0227	V g n a	G les	VSS-389401	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	289.520918	303	72	ROW	Upp ad ent, ac oss c eek, on a h ll	Ve y small ent ance n s nk, dug open, now f lled n. Small t ght cave. T ends away	No	N/A	not su table based on ent ance and on lapse	V g n a Speleolog cal Su vey, DAA Ka st Team
B g Stony Canyon Cave	VA-0222	V g n a	G les	VSS-381601	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	294.850798	294	35	ROW	Upp ad ent	Tall f ssu e on the bank of a g Stony C eek	No	N/A	not su table based on cave length	V g n a Speleolog cal Su vey, West V g n a Speleolog cal Su vey
G eenle Glen ay Cave	WV-0067	West V g n a	Mon oe	WV-0067-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	251.972425	252	20	Access Road and ROW	Upp ad ent f om outh	Sma l	No	N/A	not su table based on cave length	V g n a Speleolog cal Su vey, DAA Ka st Team
Hoges Fa m Cave	VA-0228	V g n a	G les	VSS-395601	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	251.318153	251	20	Access Road	On h ls de oppo te AR	2 x2 ent ance, f ssu e on the h ls de t ends downw d about 45 deg. est.	No	N/A	not su table based on cave length	V g n a Speleolog cal Su vey, DAA Ka st Team
Plumb Bob P t	VA-0213	V g n a	G les	VSS-355501	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	192.551463	193	100	Access Road	S deways f om AR / oult c oad	Sma l open a p t leads to a na ow f ssu e	No	N/A	not su table based on su face p t	V g n a Speleolog cal Su vey
Mahaffey T ash Cave	VA-0153	V g n a	G les	VA-0153-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	190.415536	190	0	Access Road	S deways f om outh	T ash f lled s nk could have been an ent ance at one t me. No cave	No	N/A	not su table, f lled	DAA Ka st Team
Newpo t Cave	VA-0253	V g n a	G les	VSS-179201	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	138.360632	139	40	ROW	Upp ad ent of outh	A small oom	No	N/A	not su table based on cave length	Douglas, V g n a Speleolog cal Su vey
Conkl n S nk Cave	VA-0144	V g n a	G les	VA-0144-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	139.340206	139	15	ROW	Ma g nally downg ad ent and ac oss ad f om outh. In s nkhole	1 x3 f ssu e n bottom of s nkhole w th small sto muate catchment d ng n	No	N/A	not su table based on cave length	V g n a Speleolog cal Su vey, DAA Ka st Team
Uho st Cave	VA-0157	V g n a	G les	VA-0157-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	102.30578	102	72	ROW	S deways f om outh	3 x1 h ls de ent ance leads to a ng le canyon about 4 w de, 7 h gh. D y. No a flow. T ends pa allel	No	N/A	not su table based on cave length and no a flow	DAA Ka st Team
W llams Contact Sha t	VA-0143	V g n a	G les	VA-0143-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	73.887028	74	75	ROW	S deways f om outh	3 x3 open a p t. No passage	No	N/A	not su table based on su face p t	V g n a Speleolog cal Su vey
Unknown (G vens)	VA-0132	V g n a	G les	VA-0132-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	61.037877	61	0	ROW	Uph ll f om ROW	St eam s nks n c ev ce too small to ente . No a flow	No	N/A	no impact based topog aphy upg ad ent, not su table based on ent ance and cave length	DAA Ka st Team
Echols Cave	VA-0164	V g n a	G les	VA-0164-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	1.157496	38	535	Access Road	On h ll above AR	Rock over ve y small ent ance. Cave has ve y t ght squence not fa n de (g edat on suscep ble). T end east away f om AR	No	N/A	no impact based on upg ad ent and t end away, not su table based on ent ance s ze and blockage	Douglas, V g n a Speleolog cal Su vey, DAA Ka st Team
H gh Voltage Cave	VA-0154	V g n a	G les	VA-0154-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	21.463224	31	0	ROW	Upp ad ent, ac oss c eek, ng	F ssu e too sma l to ente , can see n 7 o 8 feet ho zontally. D y. No a flow	No	N/A	not su table based on cave length	DAA Ka st Team
Hog Hole	VA-0162	V g n a	G les	VA-0162-1	Unknown	Su tab l ty Unknown	Su tab l ty Unknown	22.25776	17	10	ROW	Downg ad ent but not n d g w	A c awl between bedd ng planes. D y. No a flow	No	N/A	not su table based on cave length	Hols nge , DAA Ka st Team

*To be cons de d su table hab tab ■

1. The open ngs should be at least one (1) foot n d amete o la ge .
2. The passage should cont nue beyond the "da k zone" and not have an obv us end w th n 40 feet of ent ance.
3. Ent ances that a e flooded o p one to flood ng (e. g. sh s on ce f rd, col lapsed shut, o other w se nccess ble to bats w ll be excluded.
4. Open ngs that have occu ed recently (e., w th n the past 12 months) due to c eat on o subs dence.

**Potent al const uct on impact evaluat on was based on ■

1. Locat on and o x om ty to l m ts of d st buce (LOD)
2. T end away f om LOD
3. Topog aphy sett ng; up ad ent
4. Hyd ology
5. Spec f c const uct on act v tes n p o x om ty to featu e

***Refc ences

DAA (D ape Aden Assoc ates) Ka st Team (qual f cat on attached)

B l Baffou –P offess onal Geolog st, ka st and natu al esou ce f osu ce. 45 yea s expe ence cave and ka st mapp ng and esee ch. West V g n a and V g n a Speleolog cal Su vey. Ma ke f ul ed –Group of Analyst, geology, env onment, at ty focus. 35 yea s expe ence cave and ka st mapp ng and esee ch. V g n a Speleolog cal Su vey.

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