

Attachment IP-5c1 - Variances: Affect Multiple Landowners or Sensitive Environmental Areas																							Total Change (+/-) in clearing of trees by species habitat type								
Variance Number	Begin MP	End MP	Description	Parcel ID	Landowner Approval	New Landowners Affected?	Residences within 50 feet of Construction Work Area?	Within Original Study Corridor?	Description of New Route Land Use/Cover	Existing Land Use/Cover Type	Length of Forested Area Crossed (feet)	Length of Interior Forested Area Crossed (feet)	Cultural Resource/Federally List Species Affected by Deviation	Environmentally Sensitive Areas Within/Abutting Area of Deviation	Waterbodies Crossed and Width (feet)	Length of Wetlands Crossed by Type (PFO, PSS, PEM) (feet)	Nationwide 12 permit modifications	Alignment Sheet Number	Roanoke Loggerch Impact	Candy Darter Impact	Mussel Impact	RPBB Impact	Plant Impact	Total Change +/- in LOD (acres)	MYSO - Known Summer Use Habitat (acres)	MYSO - Known use spring staging/fall swarming habitat (acres)	MYSO - Suitable Unoccupied Summer Habitat (acres)	MYSO - Unknown use spring staging/fall swarming habitat (acres)	MYSO - Unknown Summer Habitat (acres)	NLEB known use spring staging/fall swarming habitat (acres)	
VAR-WV-WE-01	0.00	0.07	Eliminated two points of inflection.	WV-WE-001	Secured	No	No	Yes	Developed, Open Space; Deciduous Forest	Developed, Open Space; Deciduous Forest	328	29	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-WEVW-H600-01	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	0.03	0.02	0.00	0.00	0.00	0.00	0.00	
				WV-WE-001.01	Secured	No	No	Yes	Developed, Open Space; Deciduous Forest	Developed, Open Space; Deciduous Forest	328	29	None	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-WEVW-H600-01	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	-0.07	-0.06	0.00	0.00	0.00	0.00
VAR-WV-WE-02	2.71	2.71	Adjusted alignment of access road MVP-WE-008.02.	WV-WE-4215	Secured	No	Yes	No	Deciduous Forest; Developed, Open Space	Deciduous Forest; Developed, Open Space	0	0	None	W-YZ8	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	MVP-QDAR-H600-02 MVP-ADAR-H600-02	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	9.38	7.41	0.00	0.00	0.00	0.00	0.00	
VAR-WV-WE-03	2.89	3.55	Centerline adjustment to avoid existing foreign line.	WV-WE-018.01	Secured	No	No	Yes	Deciduous Forest; Developed, Open Space	Deciduous Forest; Developed, Open Space	0	3485	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-WEVW-H600-04 PA-WEVW-H600-05	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	-0.65	-0.65	0.00	0.00	0.00	0.00	0.00	
				WV-WE-018.02.1	Secured	No	No	Yes	Deciduous Forest; Developed, Open Space	Deciduous Forest; Developed, Open Space	0	3485	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-WEVW-H600-04 PA-WEVW-H600-05	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	0.75	0.75	0.00	0.00	0.00	0.00	0.00
				WV-WE-018.03	Secured	No	No	Yes	Deciduous Forest; Developed, Open Space	Deciduous Forest; Developed, Open Space	0	3485	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-WEVW-H600-04 PA-WEVW-H600-05	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	-0.47	-0.47	0.00	0.00	0.00	0.00	0.00
				WV-WE-018.03.1	Secured	No	No	Yes	Deciduous Forest; Developed, Open Space	Deciduous Forest; Developed, Open Space	0	3485	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-WEVW-H600-04 PA-WEVW-H600-05	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	= in LOD with	0.00	0.00	0.00	0.00	0.00	0.00
				BW-WE-2	Secured	No	No	Yes	Deciduous Forest; Developed, Open Space	Deciduous Forest; Developed, Open Space	0	3485	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-WEVW-H600-04 PA-WEVW-H600-05	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	0.25	0.08	0.00	0.00	0.00	0.00	0.00
				WV-WE-018.06	Secured	No	No	Yes	Deciduous Forest; Developed, Open Space	Deciduous Forest; Developed, Open Space	0	3485	None	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-WEVW-H600-04 PA-WEVW-H600-05	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	-0.09	-0.09	0.00	0.00	0.00	0.00
VAR-WV-WE-04	3.40	3.40	Adjusted extents of laydown yard MVP-LY-001 based on survey data.	WV-WE-4280	Secured	No	No	No	Developed, Low Intensity; Developed, Open Space; Deciduous Forest; Pasture/Hay	Developed, Low Intensity; Developed, Open Space; Deciduous Forest; Pasture/Hay	0	0	None	W-IJ88, W-IJ89, W-IJ90 (Adjacent), W-IJ91 (Adjacent)	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	MVP-ADAS-H600-01 MVP-QDAS-H600-01	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	-0.32	0.15	0.00	0.00	0.00	0.00	0.00	
				WV-WE-4281	Secured	No	No	No	Developed, Low Intensity; Developed, Open Space; Deciduous Forest; Pasture/Hay	Developed, Low Intensity; Developed, Open Space; Deciduous Forest; Pasture/Hay	0	0	None	W-IJ88, W-IJ89, W-IJ90 (Adjacent), W-IJ91 (Adjacent)	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	MVP-ADAS-H600-01 MVP-QDAS-H600-01	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	0.16	0.10	0.00	0.00	0.00	0.00
VAR-WV-HA-01	24.70	24.80	Shifted alignment and temporary workspace to avoid impacts to stream S-B14a and to avoid foreign underground utility.	WV-HA-092	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	528	None	S-B14a (Adjacent)	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-HAWV-H600-16 PA-HAWV-H600-17	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	-0.18	0.00	0.00	0.00	0.00	0.00	-0.18	0.00
				WV-HA-094	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	528	None	S-B14a (Adjacent)	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-HAWV-H600-16 PA-HAWV-H600-17	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	0.13	0.00	0.00	0.00	0.00	0.13
VAR-WV-HA-02	25.51	25.54	Eliminated point of inflection.	WV-HA-097	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	158	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-HAWV-H600-17	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
				WV-HA-097.01	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	158	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-HAWV-H600-17	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				WV-HA-095	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	158	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-HAWV-H600-17	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	-0.04	0.00	0.00	0.00	0.00	-0.04	0.00
				WV-HA-098	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	158	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-HAWV-H600-17	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (11)	0.04	0.00	0.00	0.00	0.00	0.04	0.00

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VAR-WV-LE-01	42.12	42.13	Eliminated point of inflection for foreign line crossing.	WV-LE-026	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	53	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-LEWV-H600-05	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	-0.03	0.00	0.00	0.00	0.00	-0.02	0.00	
				WV-LE-027	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	53	None	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-LEWV-H600-05	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	0.02	0.00	0.00	0.00	0.00	0.02
VAR-WV-LE-02	56.10	56.51	Adjusted alignment for foreign line parallel crossings.	WV-LE-106	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	161	2004	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-LEWV-H600-19 PA-LEWV-H600-20	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	1.22	0.00	0.00	0.00	0.00	1.22	0.00	
				WV-LE-104	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	-0.52	0.00	0.00	0.00	0.00	-0.52	0.00	
				WV-LE-107	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	-1.32	0.00	0.00	0.00	0.00	-1.32	0.00	
				BW-LE-5	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	0.62	0.00	0.00	0.00	0.00	0.62	0.00	
VAR-WV-BR-02	72.24	72.24	Changed designation of MVP-BR-095.01 from temporary to permanent.	WV-BR-020	Secured	No	No	Yes	Deciduous Forest; Developed, Open Space; Developed, Low Intensity	Deciduous Forest; Developed, Open Space; Developed, Low Intensity	0	0	None	S-174 (Protected), W-142 (Protected), W-141 (Protected)	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-BRWV-H600-07 PA-BRWV-H600-08 MVP-QDAR-H600-25 MVP-ADAR-H600-25	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				WV-BR-024	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	-0.27	0.00	0.00	0.00	0.00	-0.28	0.00	
				WV-BR-1269	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VAR-WV-BR-03	72.24	72.24	Changed designation of MVP-BR-095 from permanent to temporary.	WV-BR-020.02	Secured	No	No	Yes	Deciduous Forest; Developed, Open Space	Deciduous Forest; Developed, Open Space	0	0	None	S-159 (Adjacent), S-160 (Adjacent), W-112 (No Change)	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-BRWV-H600-07 PA-BRWV-H600-08 MVP-QDAR-H600-25 MVP-ADAR-H600-25	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	-0.20	0.00	0.00	0.00	0.00	0.00	0.00	
				WV-BR-024	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	-0.27	0.00	0.00	0.00	0.00	-0.28	0.00	
VAR-WV-BR-04	74.39	74.39	Adjusted edge of MVP-BR-101 to match county route right-of-way.	WV-BR-3979	Secured	No	No	No	NA - Area Eliminated	Deciduous Forest	0	0	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	MVP-QDAR-H600-27 MVP-ADAR-H600-27	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	= in LOD with	0.00	0.00	0.00	0.00	0.00	0.00	
				WV-BR-035	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

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VAR-WV-WB-01	83.94	83.94	Changed designation of MVP-WB-117.01 from temporary to permanent.	WV-WB-001.18	Secured	No	No	Yes	Developed, Open Space; Deciduous Forest	Developed, Open Space; Deciduous Forest	0	0	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-WBWW-H600-04 MVP-QDAR-H600-32 MVP-ADAR-H600-32	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	0.17	0.00	0.00	0.00	0.00	0.14	0.00
				WV-WB-5643	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	0.13	0.00	0.00	0.00	0.00	0.13	0.00
				WV-WB-001.24	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	0.04	0.00	0.00	0.00	0.00	0.04	0.00
				WV-WB-001.19	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	-1.11	0.00	0.00	0.00	0.00	-1.11	0.00
				WV-WB-001.23	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	0.02	0.00	0.00	0.00	0.00	0.02	0.00
				WV-WB-001.212	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	0.02	0.00	0.00	0.00	0.00	0.02	0.00
				WV-WB-001.211	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	0.04	0.00	0.00	0.00	0.00	0.04	0.00
				WV-WB-001.21	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	0.32	0.00	0.00	0.00	0.00	0.32	0.00
VAR-WV-WB-02	98.13	98.58	Adjusted alignment based on survey data.	WV-WB-027	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	441	1933	None	S-O4 (Adjacent)	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-WBWW-H600-21 PA-WBWW-H600-22	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	-0.07	0.00	0.00	0.00	0.00	-0.07	0.00
				WV-WB-028	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	-0.02	0.00	0.00	0.00	0.00	-0.02	0.00
				WV-WB-028.01	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	0.17	0.00	0.00	0.00	0.00	0.17	0.00
				WV-WB-029	Secured														No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	0.00	0.00	0.00	0.00	0.00	-0.08	0.00

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VAR-WV-WB-03	104.92	105.30	Adjusted alignment per landowner request.	WV-WB-053.01	Secured	No	No	Yes	Deciduous Forest; Cultivated Crops; Developed, Open Space	Deciduous Forest; Cultivated Crops; Developed, Open Space	1167	115	None	S-C49 (additional impact will be protected)	S-C49 (3 ft)	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-WBWW-H600-29 PA-WBWW-H600-30	No Effect - Outside RLP Range	No effect to candy darter - variance occurs within CD range but does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	-0.22	0.00	0.00	-0.17	0.00	0.00	0.00
				WV-WB-053.02	Secured														No Effect - Outside RLP Range	No effect to candy darter - variance occurs within CD range but does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	0.40	0.00	0.00	0.40	0.00	0.00	0.00
				WV-WB-059.001	Secured														No Effect - Outside RLP Range	No effect to candy darter - variance occurs within CD range but does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	-0.77	0.00	0.00	-0.53	0.00	0.00	0.00
				WV-WB-058	Secured														No Effect - Outside RLP Range	No effect to candy darter - variance occurs within CD range but does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (6)	0.91	0.00	0.00	0.91	0.00	0.00	0.00
				WV-WB-059.01	Secured														No Effect - Outside RLP Range	No effect to candy darter - variance occurs within CD range but does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (4)	-0.12	0.00	0.00	-0.12	0.00	0.00	0.00
VAR-WV-GB-01	136.15	136.30	Eliminated three points of inflection.	WV-GR-003	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	92	0	None	W-M15, W-M16, W-M17	None	PEM (48.6 ft)	Huntington District - no changes to impacts	PA-GRWV-H600-01	No Effect - Outside RLP Range	No effect to candy darter - variance occurs within CD range but does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (3)	-0.01	0.00	0.00	0.00	0.00	-0.06	0.00
VAR-WV-GB-02	147.40	147.54	Eliminated point of inflection.	WV-GR-037	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	404	335	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-GRWV-H600-15	No Effect - Outside RLP Range	No effect to candy darter - variance occurs within candy darter - variegate darter hybridization range and does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (3)	0.00	0.00	0.00	0.00	0.00	0.00	
				WV-GR-039	Secured														No Effect - Outside RLP Range	No effect to candy darter - variance occurs within candy darter - variegate darter hybridization range and does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (3)	0.00	0.00	0.00	0.04	0.00	-0.04	0.00
VAR-WV-GB-03	151.22	151.32	Eliminated two points of inflection.	WV-GR-054	Secured	No	No	Yes	Cultivated Crops; Deciduous Forest; Pasture/Hay	Cultivated Crops; Deciduous Forest; Pasture/Hay	418	0	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-GRWV-H600-19	No Effect - Outside RLP Range	No effect to candy darter - variance occurs within candy darter - variegate darter hybridization range and does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (3)	-0.05	0.00	0.00	0.00	0.00	0.00	0.00
				WV-GR-055	Secured														No Effect - Outside RLP Range	No effect to candy darter - variance occurs within candy darter - variegate darter hybridization range and does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (5)	0.05	0.00	0.00	0.00	0.00	0.01	0.00

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Variance Number	Begin MP	End MP	Description	Parcel ID	Landowner Approval	New Landowners Affected?	Residences within 50 feet of Construction Work Area?	Within Original Study Corridor?	Description of New Route Land Use/Cover	Existing Land Use/Cover Type	Length of Forested Area Crossed (feet)	Length of Interior Forested Area Crossed (feet)	Cultural Resource/Federally List Species Affected by Deviation	Environmentally Sensitive Areas Within/Abutting Area of Deviation	Waterbodies Crossed and Width (feet)	Length of Wetlands Crossed by Type (PFO, PSS, PEM) (feet)	Nationwide 12 permit modifications	Alignment Sheet Number	Roanoke Loggerch Impact	Candy Darter Impact	Mussel Impact	RPBB Impact	Plant Impact	Total Change +/- in LOD (acres)	MYSO - Known Summer Use Habitat (acres)	MYSO - Known use spring staging/fall swarming habitat (acres)	MYSO - Suitable Unoccupied Summer Habitat (acres)	MYSO - Unknown use spring staging/fall swarming habitat (acres)	MYSO - Unknown Summer Habitat (acres)	NLEB known use spring staging/fall swarming habitat (acres)														
VAR-WV-GB-04	154.83	154.83	Added MVP-ATWS-605 to facilitate hydrostatic testing.	WV-GR-067.005	Secured				Developed Open Space; Pasture/Hay; Emergent Herbaceous Wetlands	NA	0	0	None	S-L25/K18 (Protected), W-K7 (Protected), W-KS (Protected), W-HH01 (Protected), S-HH8 (Protected)	None	None		PA-GRWV-H600-23	No Effect - Outside RLP Range	No effect to candy darter - variance occurs within candy darter - variegated darter hybridization range and does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (3)	-8.92	0.00	0.00	-0.42	0.00	0.00	0.00														
				WV-GR-067.003	Secured	WV-GR-067.003; WV-GR-067.004; WV-GR-067.005	No	No																																				
				WV-GR-067.004	Secured																																							
VAR-WV-SU-07	158.59	158.78	Adjusted temporary right-of-way to avoid impacts to wetland W-13.	WV-SU-5154	Secured				Deciduous Forest	Deciduous Forest	660	343.2	None	W-J3 (Adjacent)	None	None		PA-SUWV-H600-02	No Effect - Outside RLP Range	No effect to candy darter - variance occurs within candy darter - variegated darter hybridization range and does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (7)	-0.09	0.00	0.00	-0.09	0.00	0.00	0.00	0.00													
				WV-SU-002.02	Secured	No	No	Yes																																				
				WV-SU-5891	Secured																																							

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VAR-WV-GB-05	162.50	162.50	Added laydown yard MVP-LY-030.	WV-GR-5838	Secured		No	No	Cultivated Crops; Barren Land; Deciduous Forest; Developed. Low Intensity	NA	0	0	None	None	None	None		MVP-ADAS-H600-03 MVP-QDAR-H600-03	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (3)	0.27	0.00	0.00	0.00	0.00	0.00	0.00		
				WV-GR-5837	Secured														WV-GR-5837; WV-GR-5838; WV-GR-5880	Additional impacts to USACE Jurisdictional Features will not occur.	No Effect - Outside RLP Range	Outside candy darter range	variance does not occur at	No effect (2)	No effect (3)	16.43	0.00	0.00	0.00	0.00	0.96	0.00
				WV-GR-5880	Secured														Additional impacts to USACE Jurisdictional Features will not occur.	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (3)	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VAR-WV-SU-01	172.40	172.40	Adjusted access road MVP-SU-208.01 based on survey data.	WV-SU-052	Secured	No	No	No	Deciduous Forest; Pasture/Hay; Developed, Open Space	Deciduous Forest; Pasture/Hay; Developed, Open Space	0	0	None	S-K3 (Protected), S-K4, P-K2	S-K3 (None), S-K4 (2 ft)	None		PA-SUWV-H600-17 MVP-ADAR-H600-71 MVP-QDAR-H600-71	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (7)	0.09	0.00	0.00	0.00	0.00	0.07	0.00		
VAR-WV-SU-02	172.58	172.69	Eliminated two points of inflection.	WV-SU-055	Secured	No	No	Yes	Deciduous Forest; Developed, Open Space	Deciduous Forest; Developed, Open Space	41	0	None	S-J5 (Reduction)	S-J5 (20 ft)	None		PA-SUWV-H600-17	No Effect - Outside RLP Range	Outside candy darter range	variance does not occur at	No effect (2)	No effect (7)	0.15	0.00	0.00	0.00	0.00	0.02	0.00		
				WV-SU-056	Secured														Additional impacts to USACE Jurisdictional Features will not occur.	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (7)	0.06	0.00	0.00	0.00	0.00	0.00	0.06	0.00
VAR-WV-SU-03	173.11	173.29	Eliminated point of inflection.	WV-SU-056	Secured	No	No	Yes	Pasture/Hay; Deciduous Forest	Pasture/Hay; Deciduous Forest	436	108	None	S-J4	S-J4 (5 ft)	None		PA-SUWV-H600-18	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (7)	0.06	0.00	0.00	0.00	0.00	0.06	0.00		
VAR-WV-SU-04	173.55	173.66	Eliminated point of inflection.	WV-SU-055.01	Secured	No	No	Yes	Deciduous Forest; Pasture/Hay	Deciduous Forest; Pasture/Hay	335	45	None	None	None	None		PA-SUWV-H600-18	No Effect - Outside RLP Range	Outside candy darter range	variance does not occur at	No effect (2)	No effect (7)	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
				WV-SU-055	Secured														Additional impacts to USACE Jurisdictional Features will not occur.	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (7)	0.15	0.00	0.00	0.00	0.00	0.00	0.02	0.00
VAR-WV-SU-05	174.06	174.26	Eliminated two points of inflection.	WV-SU-055	Secured	No	No	Yes	Pasture/Hay; Developed, Low Intensity; Cultivated Crops	Pasture/Hay; Developed, Low Intensity; Cultivated Crops	0	0	None	S-G47 (Reduction), W-G7 (Reduction)	S-G47 (2 ft)	PEM (19.4 ft)		PA-SUWV-H600-19	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (7)	0.15	0.00	0.00	0.00	0.00	0.02	0.00		
				WV-SU-059	Secured														Additional impacts to USACE Jurisdictional Features will not occur.	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (7)	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VAR-WV-SU-06	174.37	174.55	Eliminated point of inflection.	WV-SU-059.01	Secured	No	No	Yes	Pasture/Hay; Deciduous Forest	Pasture/Hay; Deciduous Forest	171	0	None	None	None	None		PA-SUWV-H600-19 PA-MOWV-H600-01	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (7)	-0.07	0.00	0.00	0.00	0.00	0.00	0.00		
				WV-MO-004	Secured														Additional impacts to USACE Jurisdictional Features will not occur.	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	-0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VAR-WV-MO-01	174.64	174.77	Eliminated point of inflection.	WV-MO-004	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	0	None	None	None	None		PA-MOWV-H600-01	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	-0.03	0.00	0.00	0.00	0.00	0.00	0.00		
				WV-MO-0860	Secured														Additional impacts to USACE Jurisdictional Features will not occur.	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.00
VAR-WV-MO-02	177.64	177.72	Eliminated point of inflection.	WV-MO-012.030	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	422	None	None	None	None		PA-MOWV-H600-04	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	0.07	0.00	0.07	0.00	0.00	0.00	0.00		
				WV-MO-012.035	Secured														Additional impacts to USACE Jurisdictional Features will not occur.	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	-0.08	0.00	-0.08	0.00	0.00	0.00	0.00	0.00

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VAR-WV-MO-03	177.97	178.06	Eliminated two points of inflection.	WV-MO-012.030	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	475	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-MOWV-H600-04	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	0.07	0.00	0.07	0.00	0.00	0.00	0.00
				WV-MO-012.035	Secured					Deciduous Forest									No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	-0.08	0.00	-0.08	0.00	0.00	0.00	0.00
VAR-WV-MO-04	187.19	187.19	Adjusted alignment of access road MVP-MO-225 to match existing road.	WV-MO-012.180	Secured	No	No	Yes	Evergreen Forest; Mixed Forest; Deciduous Forest	Evergreen Forest; Mixed Forest; Deciduous Forest	0	0	None	S-H60 (Protected), W-H29 (Adjacent), W-H30 (Adjacent), S-H59 (Adjacent)	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-MOWV-H600-15 MVP-ADAR-H600-76 MVP-QDAR-H600-76	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	-0.09	0.00	-0.05	0.00	0.00	0.00	
				WV-MO-012.183	Secured					Deciduous Forest									No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	-0.03	0.00	-0.03	0.00	0.00	0.00	
VAR-VA-GI-01	200.00	200.00	Added MVP-LY-028 and access roads MVP-ANC-004 and MVP-ANC-005 to allow entry to and travel through laydown yard MVP-LY-028.	VA-GI-5930	Secured	VA-GI-5871; VA-GI-5872; VA-GI-5873; VA-GI-5930	Yes	No	Developed, Open Space; Developed, Low Intensity; Developed, Medium Intensity; Deciduous Forest; Open Water; Developed, High Intensity	NA	0	0	None	S-MN35 (Protected), W-MN13b (Protected), W-MN13a (Protected), W-AD1 (Protected), W-AC3 (Protected), W-AC2 (Protected), W-MN12 (Protected)	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	MVP-QDAS-H600-06	No Effect - Outside RLP Range	No effect to candy darter - variance occurs within CD range but does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	0.60	0.00	0.00	0.00	0.00	0.00	0.00
				VA-GI-5873	Secured					Developed, Open Space									No Effect - Outside RLP Range	No effect to candy darter - variance occurs within CD range but does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	4.23	0.00	0.00	0.00	0.00	0.84	0.00
				VA-GI-5872	Secured					Developed, Open Space									No Effect - Outside RLP Range	No effect to candy darter - variance occurs within CD range but does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	5.44	0.00	0.00	0.00	0.00	2.31	0.00
				VA-GI-5871	Secured					Developed, Open Space									No Effect - Outside RLP Range	No effect to candy darter - variance occurs within CD range but does not occur at stream crossing with suitable CD habitat	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	1.30	0.00	0.00	0.00	0.00	0.00	0.00
VAR-VA-GI-02	209.42	209.42	Changed designation of MVP-GI-245.01 from temporary to permanent.	VA-GI-5447	Secured	No	No	Yes	Deciduous Forest; Evergreen Forest; Developed, Open Space	Deciduous Forest; Evergreen Forest; Developed, Open Space	0	0	None	S-I16-a	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-GIVA-H600-14 MVP-ADAR-H600-84 MVP-QDAR-H600-84	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	0.93	0.00	0.79	0.00	0.00	0.00	0.00
				VA-GI-4417	Secured					Developed, Open Space									No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (11)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VAR-VA-MN-01	225.20	225.20	Rerouted access road MVP-MN-266.03 based on survey data.	VA-MO-5530	Secured	No	No	No	Developed, Open Space; Deciduous Forest	Developed, Open Space; Deciduous Forest	0	0	None	S-AC1 (Adjacent), W-AD4	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-MOVA-H600-09 MVP-ADAR-H600-87 MVP-QDAR-H600-87	No effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (9)	0.54	0.00	0.00	0.00	0.26	0.00	0.00
VAR-VA-MN-02	227.36	227.36	Changed designation and name of MVP-MN-268 from permanent to temporary and to MVP-MN-268.01 past groundbed MVP-CPGB 23.	VA-MO-053	Secured	No	No	Yes	Pasture/Hay; Deciduous Forest; Developed, Open Space	Pasture/Hay; Deciduous Forest; Developed, Open Space	0	0	None	S-G36, S-NN8b, S-G38 (Adjacent), S-G40 (Adjacent), W-NN7 (Adjacent)	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-MOVA-H600-11 MVP-ADAR-H600-88 MVP-QDAR-H600-88	No effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (9)	0.18	0.00	0.00	0.00	-1.33	0.00	0.00
				VA-MO-057	Secured					Developed, Open Space									No effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (9)	-0.40	0.00	0.00	0.00	-0.04	0.00	0.00
VAR-VA-MN-03	228.48	228.48	Extended edge of access road MVP-MN-270 to match existing state road right-of-way.	VA-MO-5356	Secured	No	No	Yes	Deciduous Forest; Evergreen Forest; Mixed Forest; Developed, Open Space; Pasture/Hay	Deciduous Forest; Evergreen Forest; Mixed Forest; Developed, Open Space; Pasture/Hay	0	0	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	MVP-ADAR-H600-90 MVP-QDAR-H600-90	No effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (9)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				VA-MO-5885	Secured					Pasture/Hay									No effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (9)	0.00	0.00	0.00	0.00	0.00	0.00	

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Variance Number	Begin MP	End MP	Description	Parcel ID	Landowner Approval	New Landowners Affected?	Residences within 50 feet of Construction Work Area?	Within Original Study Corridor?	Description of New Route Land Use/Cover	Existing Land Use/Cover Type	Length of Forested Area Crossed (feet)	Length of Interior Forested Area Crossed (feet)	Cultural Resource/Federally List Species Affected by Deviation	Environmentally Sensitive Areas Within/Abutting Area of Deviation	Waterbodies Crossed and Width (feet)	Length of Wetlands Crossed by Type (PFO, PSS, PEM) (feet)	Nationwide 12 permit modifications	Alignment Sheet Number	Roanoke Loggerch Impact	Candy Darter Impact	Mussel Impact	RPBB Impact	Plant Impact	Total Change +/- in LOD (acres)	MYSO - Known Summer Use Habitat (acres)	MYSO - Known use spring staging/fall swarming habitat (acres)	MYSO - Suitable Unoccupied Summer Habitat (acres)	MYSO - Unknown use spring staging/fall swarming habitat (acres)	MYSO - Unknown Summer Habitat (acres)	NLEB known use spring staging/fall swarming habitat (acres)				
VAR-VA-MN-04	230.54	230.70	Adjusted pipeline centerline based on proposed substation construction.	VA-MO-073	Secured	No	Yes	No	Mixed Forest; Pasture/Hay; Developed, Low Intensity; Developed, Open Space	Mixed Forest; Pasture/Hay; Developed, Low Intensity; Developed, Open Space	0	0	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-MOVA-H600-14 PA-MOVA-H600-15	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat. Slight sediment increase will occur, but no increase in Roanoke Loggerch take as impacts in the receiving waters are already accounted for.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (9)	No change in LOD within Parcel	0.00	0.00	0.00	0.00	0.00	0.00				
				VA-MO-074	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	0	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-MOVA-H600-16	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat. Slight sediment increase will occur, but no increase in Roanoke Loggerch take as impacts in the receiving waters are already accounted for.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (10)	0.19	0.00	0.00	0.00	-0.23	0.00	0.00			
VAR-VA-MN-05	232.77	232.77	Adjusted access road MVP-MN-276.03 to straighten alignment and reduce LOD per landowner request.	VA-MO-082	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	0	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-MOVA-H600-16	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat. Reduction in upland acreage disturbed therefore reduction in sedimentation.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (9)	-0.47	0.00	0.00	-0.38	-0.08	0.00	0.00				
				VA-MO-080	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	0	0	None	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-MOVA-H600-16	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat. Reduction in upland acreage disturbed therefore reduction in sedimentation.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No direct effect (1)	No effect (9)	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
VAR-VA-FR-02	248.45	248.62	Eliminated three points of inflection.	VA-FR-010	Secured	No	No	Yes	Deciduous Forest	Deciduous Forest	191	707	None	S-D17	S-D17 (7 ft)	None	Included in final JPA submission	PA-FRVA-H600-02 PA-FRVA-H600-03	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat. Reduction in upland acreage disturbed therefore reduction in sedimentation.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	-0.03	0.00	0.00	-0.03	0.00	0.00	0.00				
VAR-VA-FR-03	265.00	265.00	Added laydown yard MVP-LY-033	VA-FR-5866	Secured	VA-FR-5866	No	No	Pasture/Hay, Developed, Open Space; Developed, Low Intensity; Developed, Medium Intensity	NA	0	0	None	W-KL45 (protected)	None	PEM (126 ft)	Additional impacts to USACE Jurisdictional Features will not occur.	MVP-ADAS-H600-07 MVP-QDAS-H600-07	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	2.35	0.00	0.00	0.00	0.00	0.00	0.00				
VAR-VA-FR-04	265.00	265.00	Added laydown yard MVP-LY-032.	VA-FR-5869	Secured	VA-FR-5867; VA-FR-5868; VA-FR-5869	No	No	Developed, Open Space; Pasture/Hay; Deciduous Forest;	Developed, Open Space; Pasture/Hay; Deciduous Forest;	NA	0	0	None	W-KL44 (Protected)	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	MVP-ADAS-H600-07 MVP-QDAS-H600-07	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	4.49	0.00	0.00	0.00	0.00	1.94	0.00			
				VA-FR-5868	Secured				Evergreen Forest; Developed, Low Intensity; Developed, Medium Intensity	Evergreen Forest; Developed, Low Intensity; Developed, Medium Intensity								Additional impacts to USACE Jurisdictional Features will not occur.	MVP-ADAS-H600-07 MVP-QDAS-H600-07	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				VA-FR-5867	Secured				Developed, Open Space; Pasture/Hay; Deciduous Forest;	Developed, Open Space; Pasture/Hay; Deciduous Forest;								Additional impacts to USACE Jurisdictional Features will not occur.	MVP-ADAS-H600-07 MVP-QDAS-H600-07	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VAR-VA-FR-05	274.85	275.13	Eliminated three points of inflection to parallel overhead power line right-of-way.	VA-FR-157	Secured	No	No	Yes	Evergreen Forest; Mixed Forest; Pasture/Hay; Developed, Open Space; Deciduous Forest	Evergreen Forest; Mixed Forest; Pasture/Hay; Developed, Open Space; Deciduous Forest	0	0	None	S-G17, S-E19 (Adjacent)	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-FRVA-H600-31	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat. Reduction in upland acreage disturbed therefore reduction in sedimentation.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	-0.13	0.00	0.00	0.01	0.00	0.00	0.00				
				VA-FR-157.01	Secured				Evergreen Forest; Mixed Forest; Pasture/Hay; Developed, Open Space; Deciduous Forest	Evergreen Forest; Mixed Forest; Pasture/Hay; Developed, Open Space; Deciduous Forest							Additional impacts to USACE Jurisdictional Features will not occur.	PA-FRVA-H600-31	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat. Reduction in upland acreage disturbed therefore reduction in sedimentation.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
VAR-VA-FR-06	275.36	275.72	Adjusted pipeline centerline to parallel overhead power line right-of-way.	VA-FR-157	Secured	No	No	Yes	Pasture/Hay; Mixed Forest; Deciduous Forest;	Pasture/Hay; Mixed Forest; Deciduous Forest;	0	0	None	S-E18, S-E17, W-E5 (Adjacent), S-I15 (Adjacent)	S-E18 (7 ft), S-E17 (None), S-I15 (None)	None	included in final JPA submission	PA-FRVA-H600-31 PA-FRVA-H600-32	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat. Variance of alignment imposes no net change in sedimentation.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	-0.13	0.00	0.00	0.01	0.00	0.00	0.00				
				VA-FR-160	Secured				Pasture/Hay; Mixed Forest; Deciduous Forest;	Pasture/Hay; Mixed Forest; Deciduous Forest;							Additional impacts to USACE Jurisdictional Features will not occur.	PA-FRVA-H600-31 PA-FRVA-H600-32	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat. Variance of alignment imposes no net change in sedimentation.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	0.06	0.00	0.00	0.02	0.00	0.00	0.00				

Attachment IP-5c1 - Variances: Affect Multiple Landowners or Sensitive Environmental Areas																						Total Change (+/-) in clearing of trees by species habitat type								
Variance Number	Begin MP	End MP	Description	Parcel ID	Landowner Approval	New Landowners Affected?	Residences within 50 feet of Construction Work Area?	Within Original Study Corridor?	Description of New Route Land Use/Cover	Existing Land Use/Cover Type	Length of Forested Area Crossed (feet)	Length of Interior Forested Area Crossed (feet)	Cultural Resource/Federally List Species Affected by Deviation	Environmentally Sensitive Areas Within/Abutting Area of Deviation	Waterbodies Crossed and Width (feet)	Length of Wetlands Crossed by Type (PFO, PSS, PEM) (feet)	Nationwide 12 permit modifications	Alignment Sheet Number	Roanoke Loggerch Impact	Candy Darter Impact	Mussel Impact	RPBB Impact	Plant Impact	Total Change +/- in LOD (acres)	MYSO - Known Summer Use Habitat (acres)	MYSO - Known use spring staging/fall swarming habitat (acres)	MYSO - Suitable Unoccupied Summer Habitat (acres)	MYSO - Unknown use spring staging/fall swarming habitat (acres)	MYSO - Unknown Summer Habitat (acres)	NLEB known use spring staging/fall swarming habitat (acres)
VAR-VA-FR-07	281.61	281.80	Adjusted pipeline centerline to parallel overhead power line right-of-way.	VA-FR-192	Secured	No	No	Yes	Shrub/Scrub; Deciduous Forest	Shrub/Scrub; Deciduous Forest	0	1003	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-FRVA-H600-37	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat. Variance of alignment imposes no net change in sedimentation.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	-0.02	0.00	0.00	-0.02	0.00	0.00	0.00
				VA-FR-193	Secured														Additional impacts to USACE Jurisdictional Features will not occur.	No direct effect to Roanoke loggerch - variance occurs within RLP range and does not occur at stream crossing with suitable RLP habitat. Variance of alignment imposes no net change in sedimentation.	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (10)	0.00	0.00	0.00	-0.04	0.00	0.00
VAR-VA-PI-01	299.10	299.27	Eliminated two points of inflection.	VA-PI-088	Secured	No	No	Yes	Pasture/Hay; Developed, Open Space; Deciduous Forest	Pasture/Hay; Developed, Open Space; Deciduous Forest	0	0	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-PIVA-H600-16	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (8)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				VA-PI-090	Secured														Additional impacts to USACE Jurisdictional Features will not occur.	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (8)	0.08	0.00	0.00	0.12	0.00	0.00
VAR-VA-PI-02	299.45	299.45	Adjusted alignment of access road MVP-PI-339 to avoid structure MVP-STR-914.	VA-PI-093	Secured	No	No	No	Pasture/Hay	Pasture/Hay	0	0	None	None	None	None	Additional impacts to USACE Jurisdictional Features will not occur.	PA-PIVA-H600-16	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (8)	0.03	0.00	0.00	0.00	0.00	0.00	0.00
				VA-PI-4156	Secured														Additional impacts to USACE Jurisdictional Features will not occur.	No Effect - Outside RLP Range	No Effect - Outside candy darter range	No effect on mussels - variance does not occur at instream Project crossing	No effect (2)	No effect (8)	-0.03	0.00	0.00	0.00	0.00	0.00
																								7.23	0.69	-0.22	-1.42	5.21	0.00	

- 1 No individuals are currently known to occur near variance. Variance is within historic range and has potential habitat for RPBB; however clearing and revegetation are likely to increase habitat connectivity and quality of foraging habitat, thus benefitting RPBB.
- 2 No individuals or populations are known to occur at the variance. Variance is within historic range and has potential habitat for RPBB; however any clearing and revegetation will increase habitat connectivity and quality of foraging habitat, thus benefitting RPBB.
- 3 No individuals of running buffalo clover are known to occur at variance. No individuals or potential habitat for shale barren rockcress occur at variance. No individuals of small whorled pogonia known to occur near variance. No individuals or habitat for Virginia spiraea known to occur at variance. Outside of smooth coneflower known range.
- 4 No individuals of running buffalo clover known to occur at variance. Outside of shale barren rockcress known range. Outside small whorled pogonia known range. Outside of Virginia spiraea known range. Outside of smooth coneflower known range.
- 5 No individuals or potential habitat for running buffalo clover are known to occur at variance. No individuals or potential habitat for shale barren rockcress occur at variance. No individuals of small whorled pogonia known to occur near variance. No individuals or habitat for Virginia spiraea known to occur at variance. Outside of smooth coneflower known range.
- 6 No individuals or potential habitat for running buffalo clover are known to occur at variance. Outside of shale barren rockcress known range. Outside small whorled pogonia known range. Outside of Virginia spiraea known range. Outside of smooth coneflower known range.
- 7 Outside of known range for running buffalo clover. Outside of shale barren rockcress known range. Outside small whorled pogonia known range. No individuals or potential habitat for Virginia spiraea known to occur at variance. Outside of smooth coneflower known range.
- 8 Outside running buffalo clover known range. Outside of shale barren rockcress known range. No individuals of small whorled pogonia known to occur at variance. Outside of Virginia spiraea known range. Outside of smooth coneflower known range.
- 9 Outside running buffalo clover known range. Outside of shale barren rockcress known range. Outside of small whorled pogonia known range. Outside of Virginia spiraea known range. No direct effects on Smooth Coneflower as no individuals and no habitat occur at variance.
- 10 Outside running buffalo clover known range. Outside of shale barren rockcress known range. Outside of small whorled pogonia known range. Outside of Virginia spiraea known range. No direct effects on Smooth Coneflower as no individuals are known to occur at variance.
- 11 Outside known range of running buffalo clover, shale barren rockcress, small whorled pogonia, Virginia spiraea, smooth coneflower.