

From: [Stahl, Megan D.](#)
To: [Lennon, Tiernan](#)
Cc: [Patrick Dockens](#); [Schmidt, John](#)
Subject: RE: [EXTERNAL] MVP - Candy Darter
Date: Tuesday, November 20, 2018 12:38:55 PM

Tiernan,

I saw that the Candy darter was officially listed. Can you provide a status of MVP's conference opinion and the next steps to convert that to a biological opinion?

Thanks,
Megan

Megan Stahl
Permitting Supervisor
2200 Energy Drive
Canonsburg, PA 15317
T 412-553-7783
C 412-737-2587
mstahl@equitransmidstream.com

****Please note my new email address***



From: Stahl, Megan D.
Sent: Friday, October 26, 2018 2:47 PM
To: 'Lennon, Tiernan' <tiernan_lennon@fws.gov>
Cc: 'Patrick Dockens' <patrick_dockens@fws.gov>; 'Schmidt, John' <john_schmidt@fws.gov>
Subject: RE: [EXTERNAL] MVP - Candy Darter

Tiernan,

As requested I am providing the following based on MVP's review of the shape files provided.

1. A map series that displays each of the Project crossings identified in the original Table 1. Each Project crossing is assigned a 200m US buffer and an 800m DS buffer. Downstream of the 800m buffer is a stream-flow path of that stream until it intersects with a Candy Darter Extant or Candy Darter Extirpated stream. If that 800m bisects a Candy Darter Extant stream, then the project crossing stays in Table 1. If the Project crossing is more than 800m away from a Candy Darter Extant stream section then it can be omitted from Table 1.
2. A revised Table 1 with notes. Column Q (titled: Notes/Rationale) describes the reasons why the stream crossing should be removed from or retained in Table 1. Please note that there is an additional stream crossing (Little Laurel Creek3) that has been added to the table, which was added to the Project as part of a variance request. There will not be any instream impacts

at Little Laurel Creek3 because the Project will utilize an existing bridge.

Please let me know if you need anything else.

Thank you,

Megan

From: Stahl, Megan D.

Sent: Wednesday, October 17, 2018 9:07 AM

To: 'Lennon, Tiernan' <tiernan_lennon@fws.gov>

Cc: Patrick Dockens <patrick_dockens@fws.gov>; Schmidt, John <john_schmidt@fws.gov>

Subject: RE: [EXTERNAL] MVP - Candy Darter

Tiernan,

There are two layers within the zip file, but only one of them can be viewed within the desktop software: "CandyDarter_extant.shp". We cannot view the "CandyDarter_extirpated.shp" within the desktop software because the CandyDarter_extirpated.shx file was not included.

Could you try to resend the data with the CandyDarter_extirpated.shx file included so that we can review both datasets?

Thanks,

Megan

From: Lennon, Tiernan <tiernan_lennon@fws.gov>

Sent: Monday, October 15, 2018 3:44 PM

To: Stahl, Megan D. <MStahl@eqt.com>

Cc: Patrick Dockens <patrick_dockens@fws.gov>; Schmidt, John <john_schmidt@fws.gov>

Subject: [EXTERNAL] MVP - Candy Darter

Hey Megan - The stream layers for candy darter have changed slightly since I sent you that map on December 1, 2017. Would you mind checking your proposed crossings against these layers to ensure that no additional candy darter streams are being crossed by the project, including all direct tributaries? Thanks!

Let me know if you have any issues opening the attached shapefiles.

PS - Please cc Patrick on the revised table we discussed earlier, thanks!

- Tiernan

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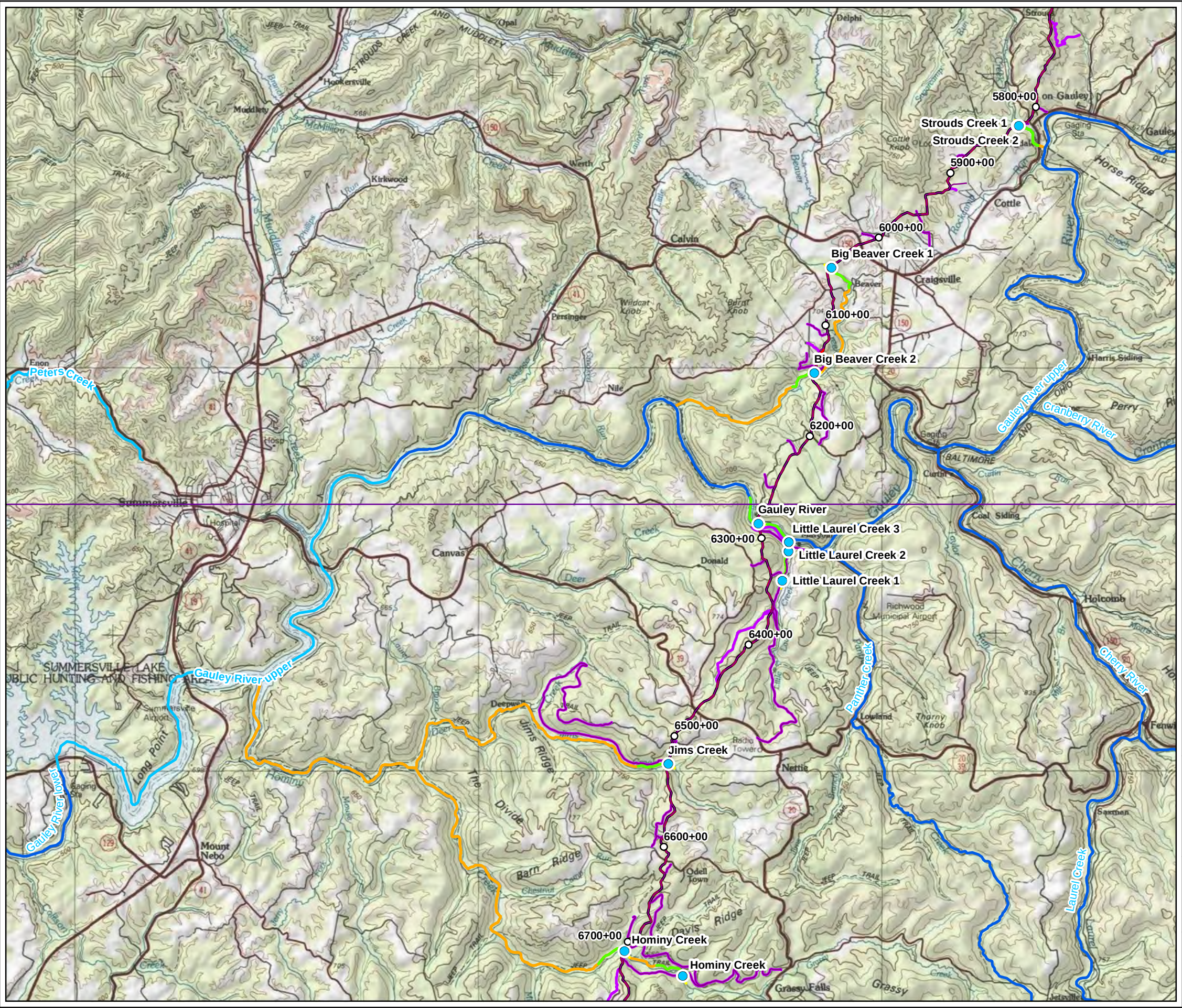
Tiernan Lennon

Fish and Wildlife Biologist
West Virginia Field Office
U.S. Fish and Wildlife Service
90 Vance Drive*

Elkins, WV 26241
(304) 636 6586 x 12
Fax: 304-636-7824
<http://www.fws.gov/westvirginiafieldoffice/index.html>

*Please, note the change to our address. We have not moved, but our address has been updated within the emergency response system.

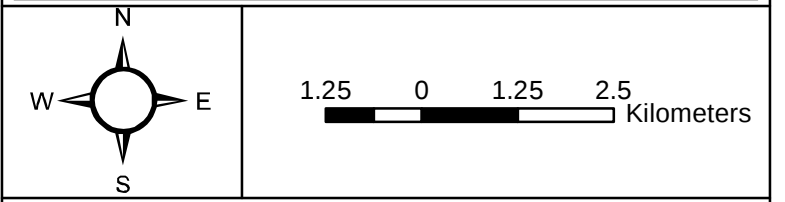
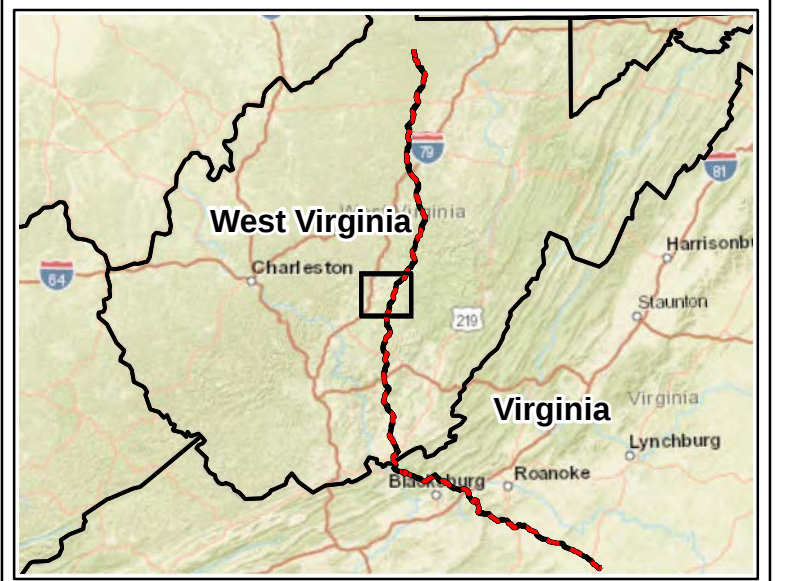
Document Path: G:\Current\593_EOT_MVPMXD\Aquatic\Candy Darter Analysis 20181018\MVP 593 Candy Darter Fig OV for 20181018 Analysis.mxd



Overview Map of the Candy Darter stream crossing review.

Map 1 of 2

- Station
- Stream Crossing
- Downstream Action Area (800m)
- Upstream Action Area (200m)
- Downstream Flowpath
- Candy Darter Stream (Extirpated)
- Candy Darter Stream (Extant)
- MVP Post IFC Centerline
- MVP Post IFC Access Rds

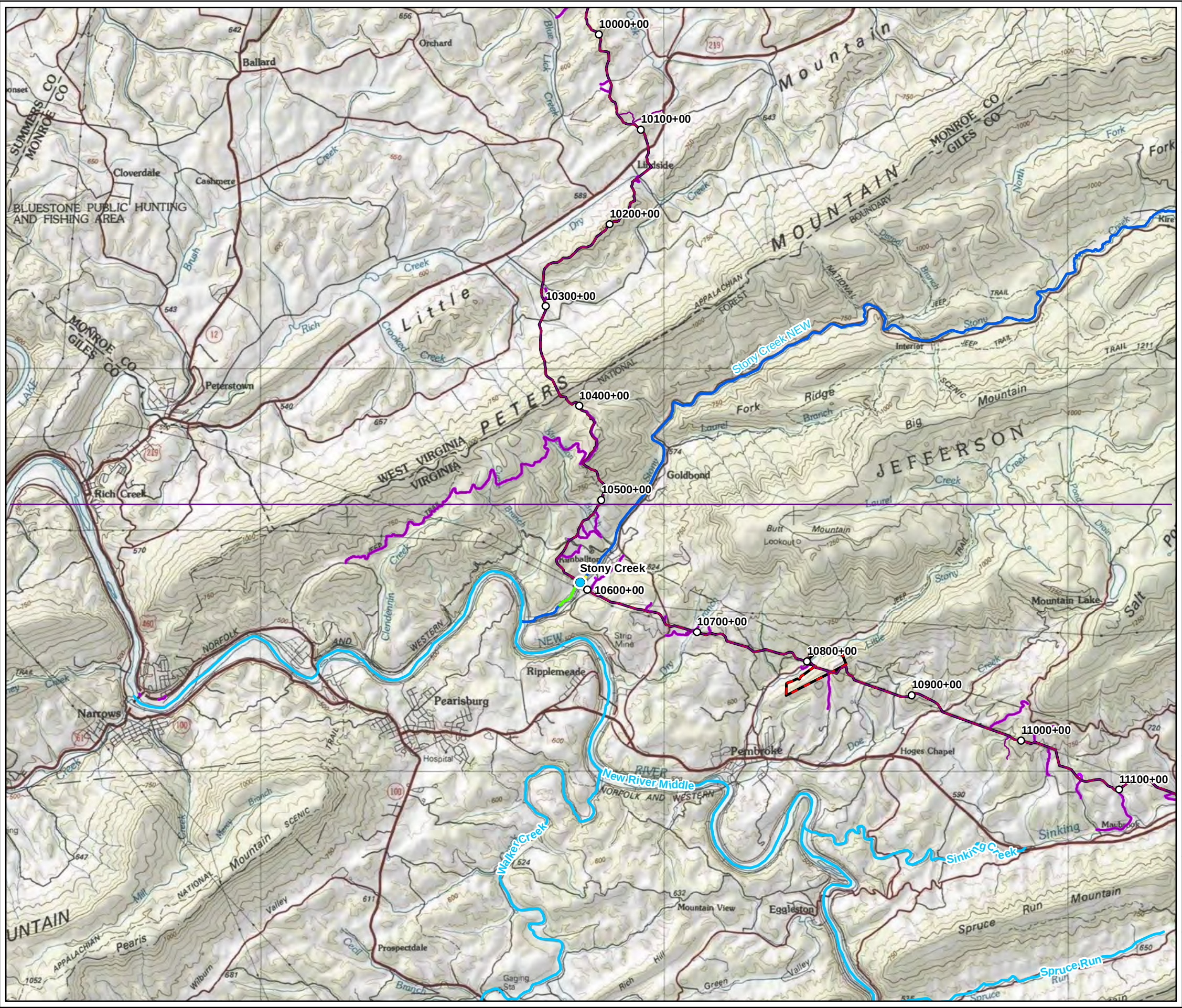


Base Map: ESRI "USA_Topo_Maps"; accessed 10/25/2018



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& INNOVATIONS, INC.
Project No. 593.17

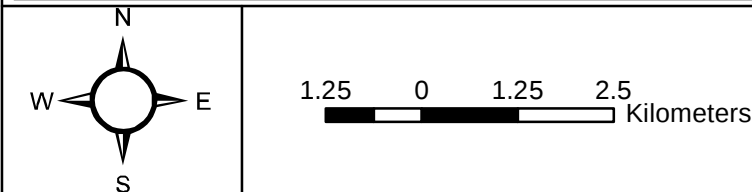
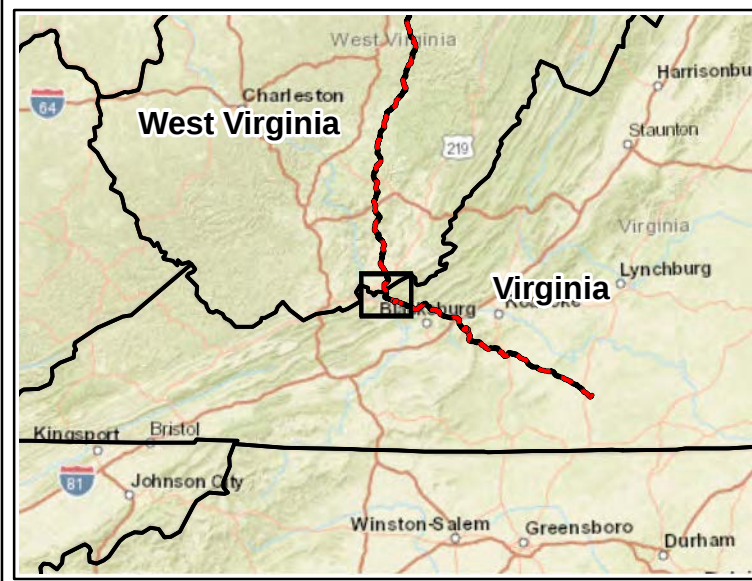
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Overview Map of the Candy Darter stream crossing review.

Map 2 of 2

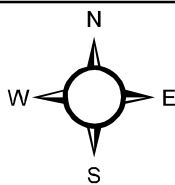
- Station
- Stream Crossing
- Downstream Action Area (800m)
- Upstream Action Area (200m)
- Downstream Flowpath
- Candy Darter Stream (Extirpated)
- Candy Darter Stream (Extant)
- MVP Post IFC Centerline
- MVP Post IFC Access Rds



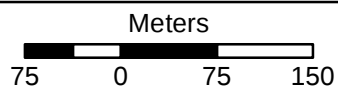
Base Map: ESRI "USA_Topo_Maps"; accessed 10/25/2018



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|-------------------------------|------------------------------|-----------------------------|
| ○ Station | Upstream Action Area (200m) | MVP Post IFC Centerline |
| ● Stream Crossing | Downstream Flowpath | MVP Post IFC Access Roads |
| Downstream Action Area (800m) | Candy Darter Stream (Extant) | Limits of Disturbance (LOD) |



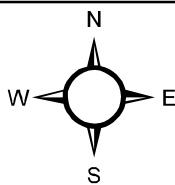
Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Strouds Creek 1



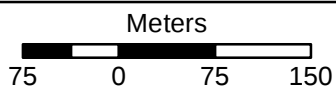
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accessed 10/25/2018



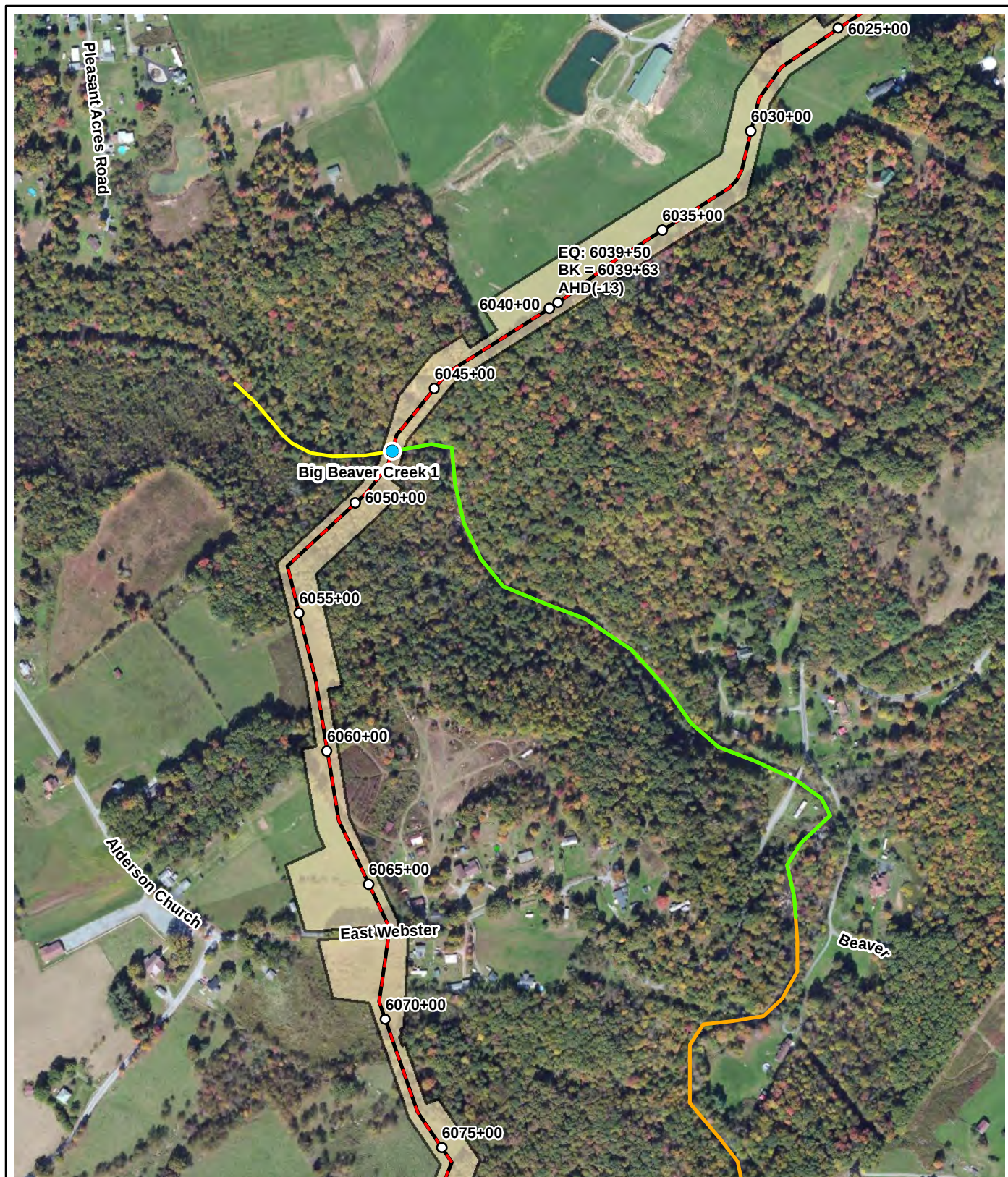
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| ○ Station | Upstream Action Area (200m) | MVP Post IFC Centerline |
| ● Stream Crossing | Downstream Flowpath | MVP Post IFC Access Roads |
| Downstream Action Area (800m) | Candy Darter Stream (Extant) | Limits of Disturbance (LOD) |



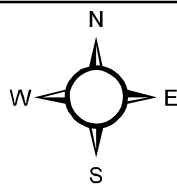
Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Strouds Creek 2



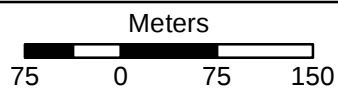
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accessed 10/25/2018



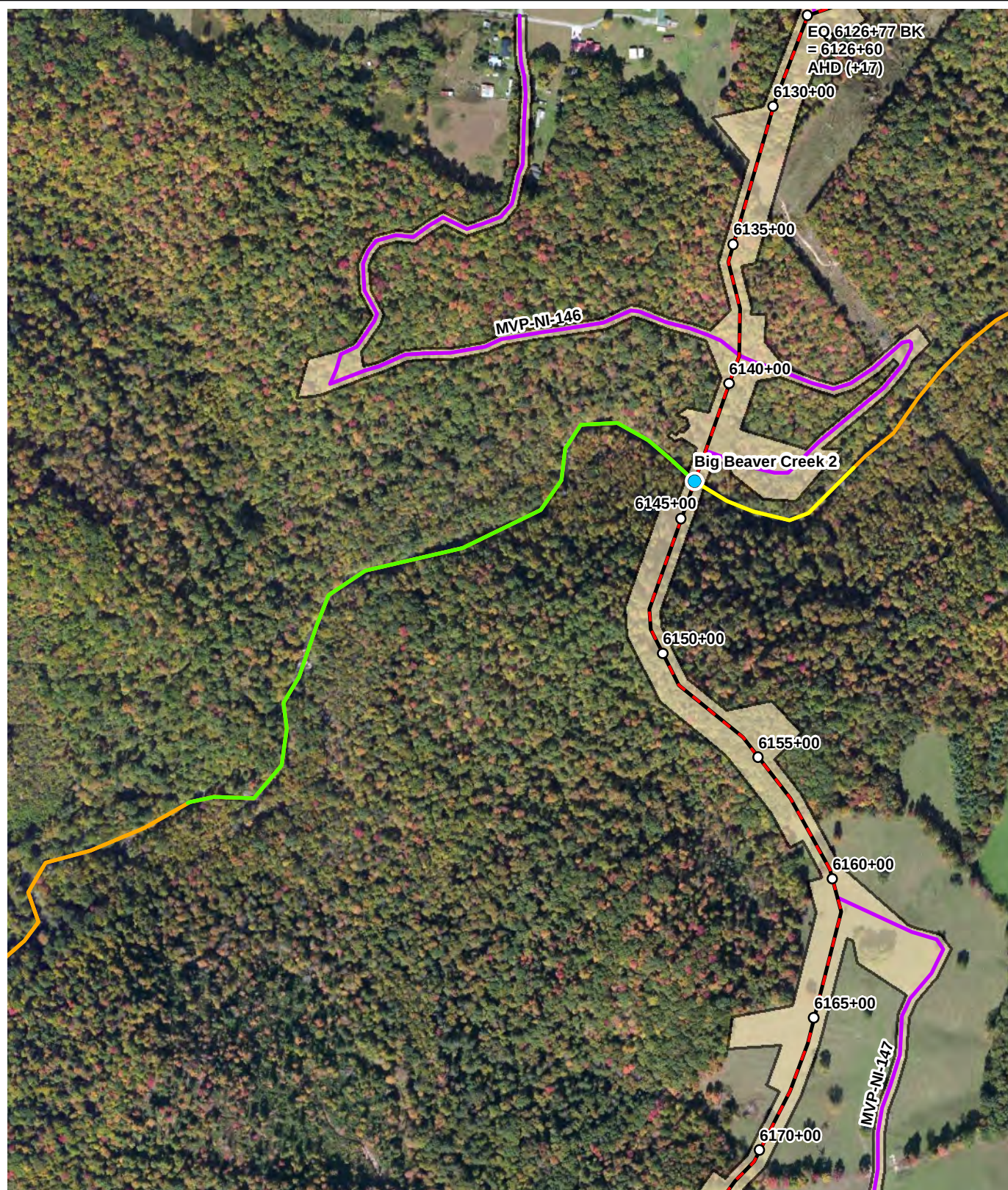
- Station
- Stream Crossing
- Upstream Action Area (200m)
- Downstream Action Area (800m)
- Downstream Flowpath
- MVP Post IFC Centerline
- ▭ Limits of Disturbance (LOD)



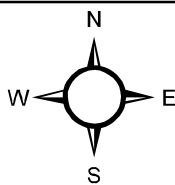
Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Big Beaver Creek 1



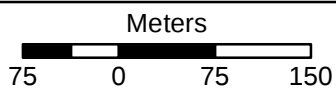
Base Map: ESRI "World Imagery (Clarity)";
accessed 10/25/2018



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| ○ Station | Upstream Action Area (200m) | MVP Post IFC Access Roads |
| ● Stream Crossing | Downstream Flowpath | Limits of Disturbance (LOD) |
| Downstream Action Area (800m) | MVP Post IFC Centerline | |



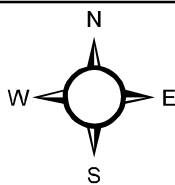
Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Big Beaver Creek 2



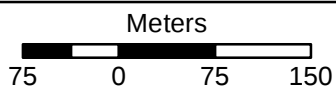
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accessed 10/25/2018



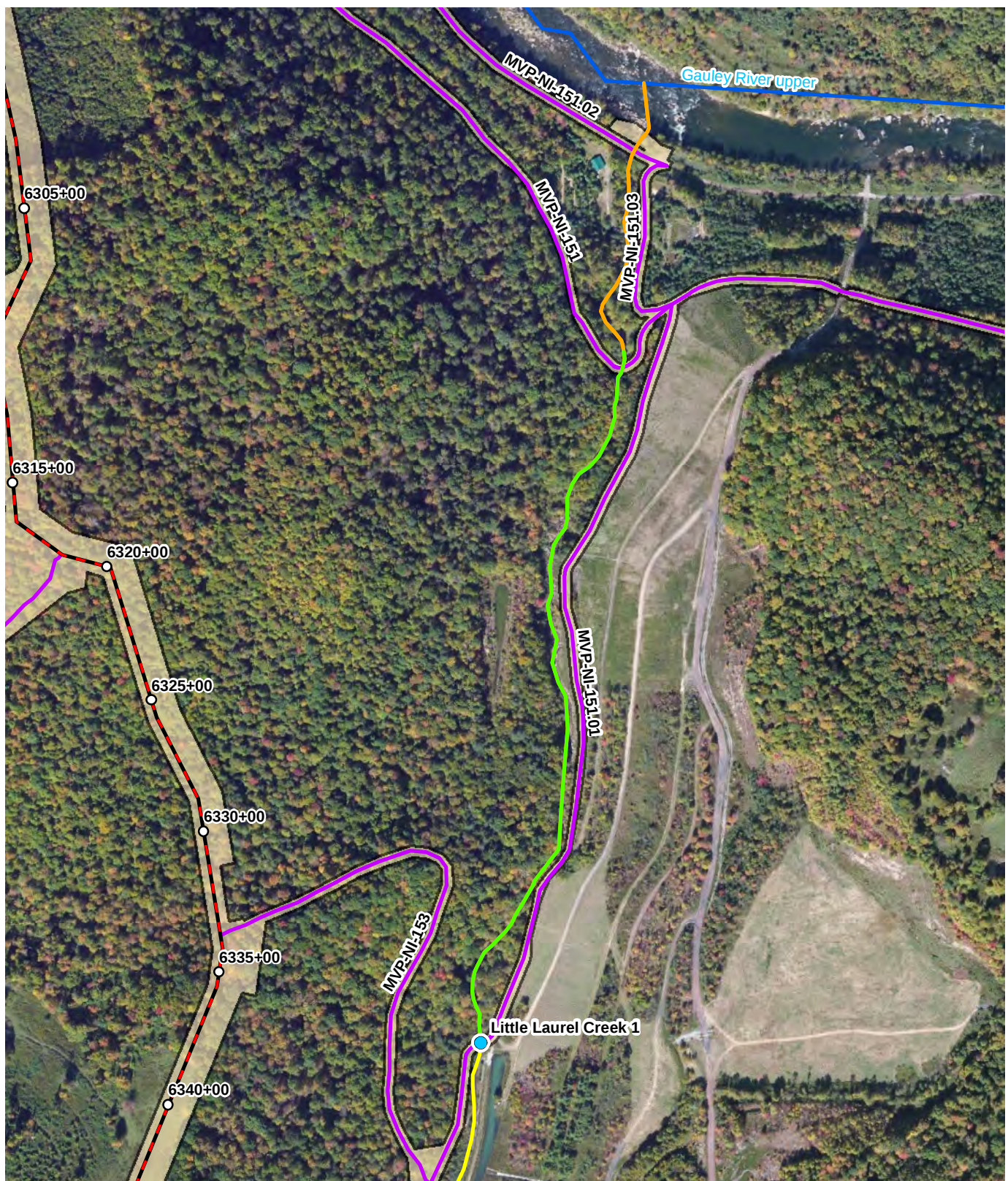
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| ○ Station | Upstream Action Area (200m) | MVP Post IFC Access Roads |
| ● Stream Crossing | Candy Darter Stream (Extant) | Limits of Disturbance (LOD) |
| Downstream Action Area (800m) | MVP Post IFC Centerline | |



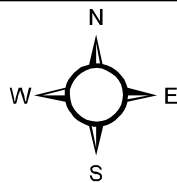
Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Gauley River



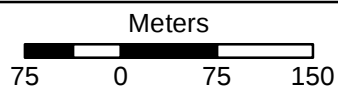
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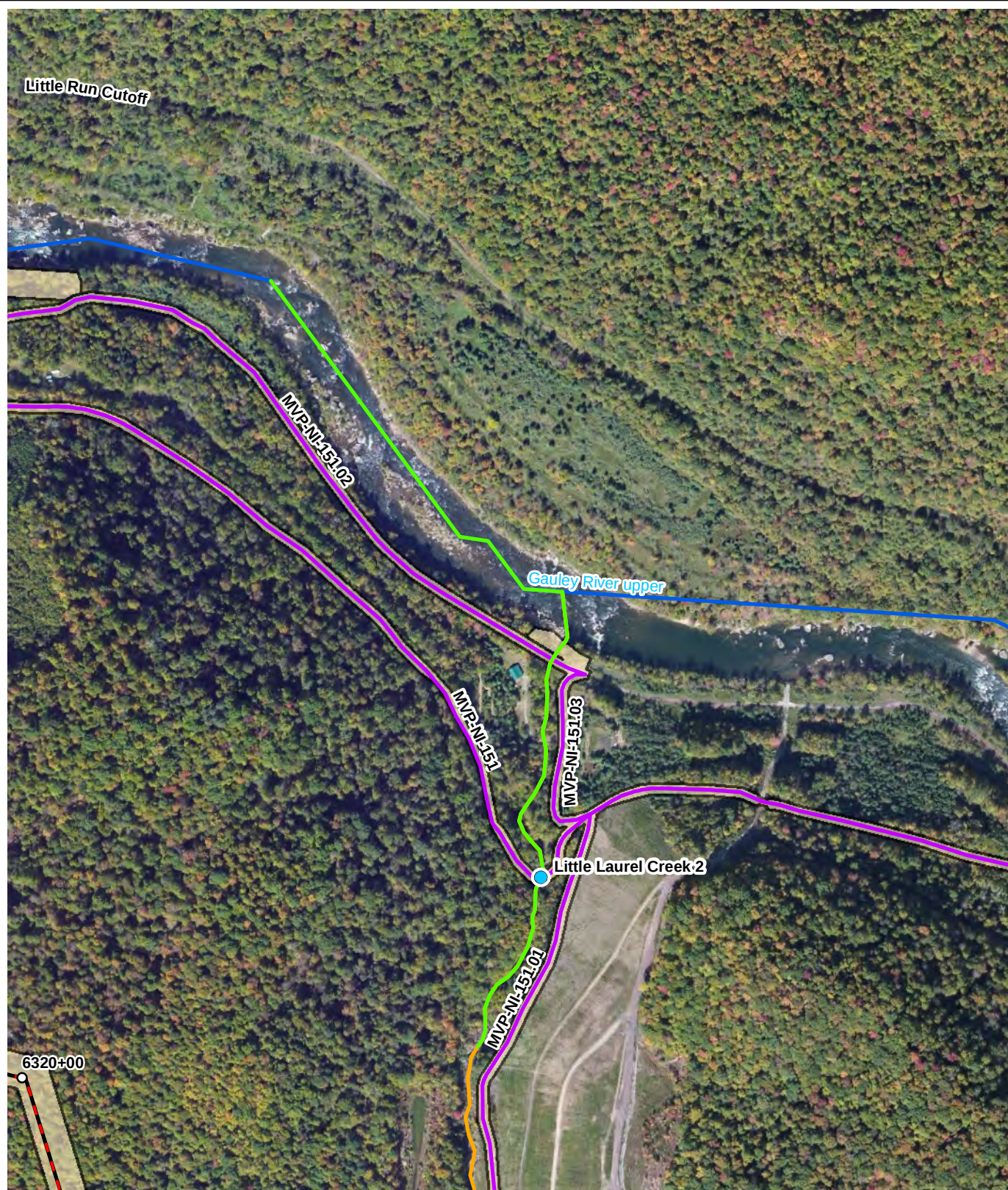
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| ○ Station | Upstream Action Area (200m) | MVP Post IFC Centerline |
| ● Stream Crossing | Downstream Flowpath | MVP Post IFC Access Roads |
| Downstream Action Area (800m) | Candy Darter Stream (Extant) | Limits of Disturbance (LOD) |



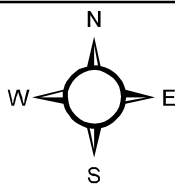
Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Little Laurel Creek 1



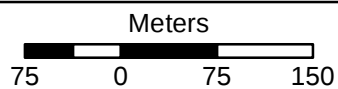
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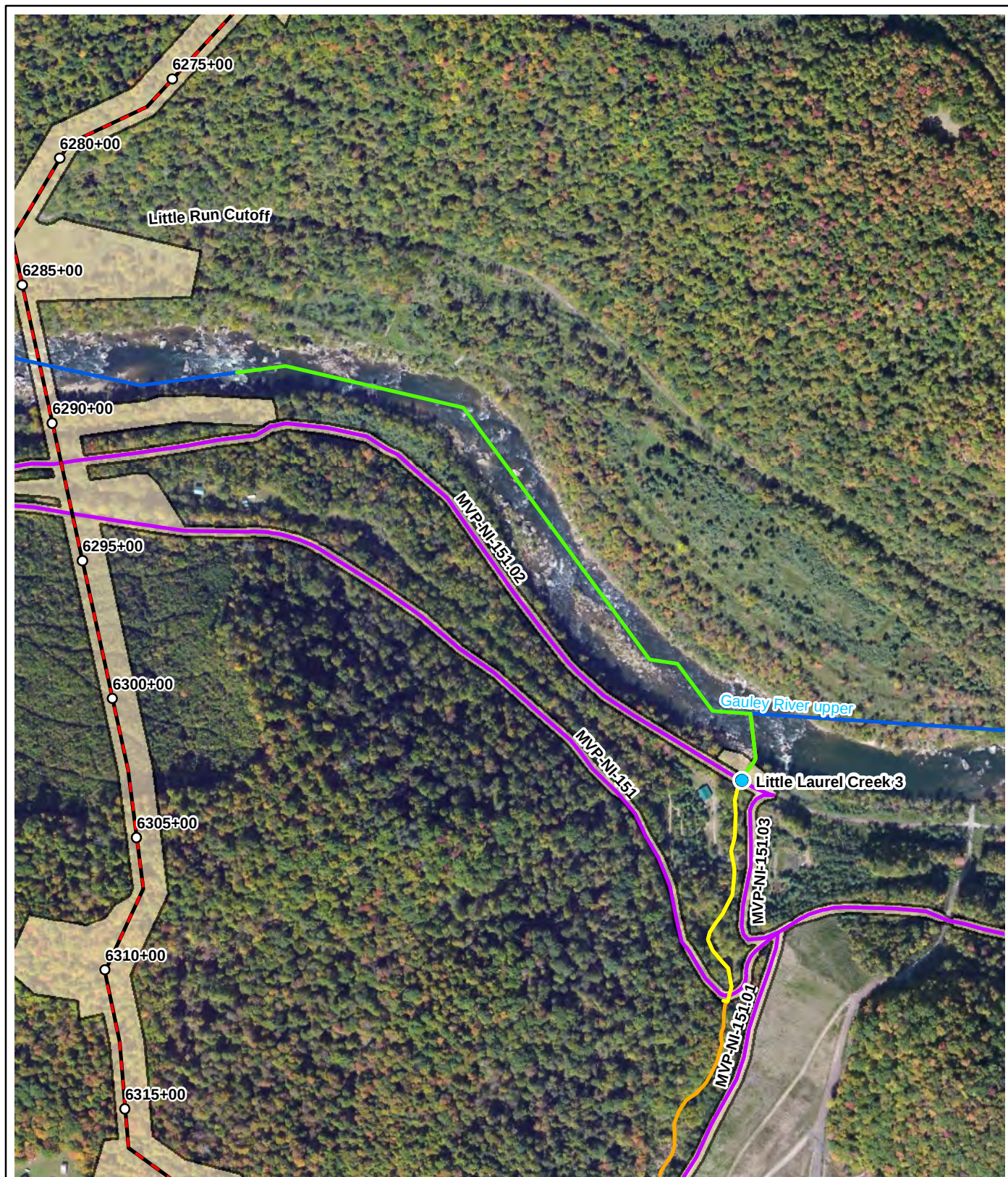
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| ○ Station | Downstream Flowpath | MVP Post IFC Access Roads |
| ● Stream Crossing | Candy Darter Stream (Extant) | Limits of Disturbance (LOD) |
| — Downstream Action Area (800m) | MVP Post IFC Centerline | |



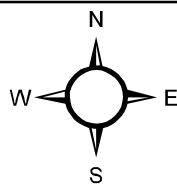
Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Little Laurel Creek 2



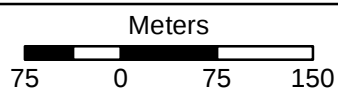
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| ○ Station | Upstream Action Area (200m) | MVP Post IFC Centerline |
| ● Stream Crossing | Downstream Flowpath | MVP Post IFC Access Roads |
| Downstream Action Area (800m) | Candy Darter Stream (Extant) | Limits of Disturbance (LOD) |



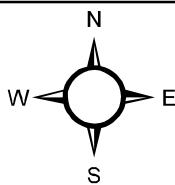
Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Little Laurel Creek 3



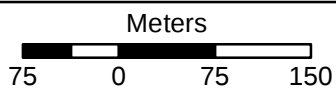
Base Map: ESRI "World Imagery (Clarity)";
accessed 10/25/2018



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| ○ Station | Upstream Action Area (200m) | MVP Post IFC Access Roads |
| ● Stream Crossing | Downstream Flowpath | Limits of Disturbance (LOD) |
| Downstream Action Area (800m) | MVP Post IFC Centerline | |



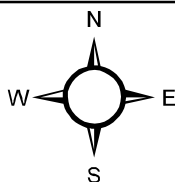
Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Jims Creek



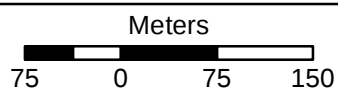
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accessed 10/25/2018



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| ○ Station | Upstream Action Area (200m) | MVP Post IFC Access Roads |
| ● Stream Crossing | Downstream Flowpath | Limits of Disturbance (LOD) |
| Downstream Action Area (800m) | MVP Post IFC Centerline | |



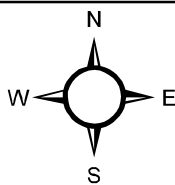
Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Hominy Creek 1



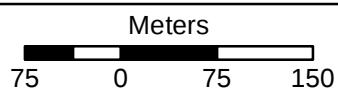
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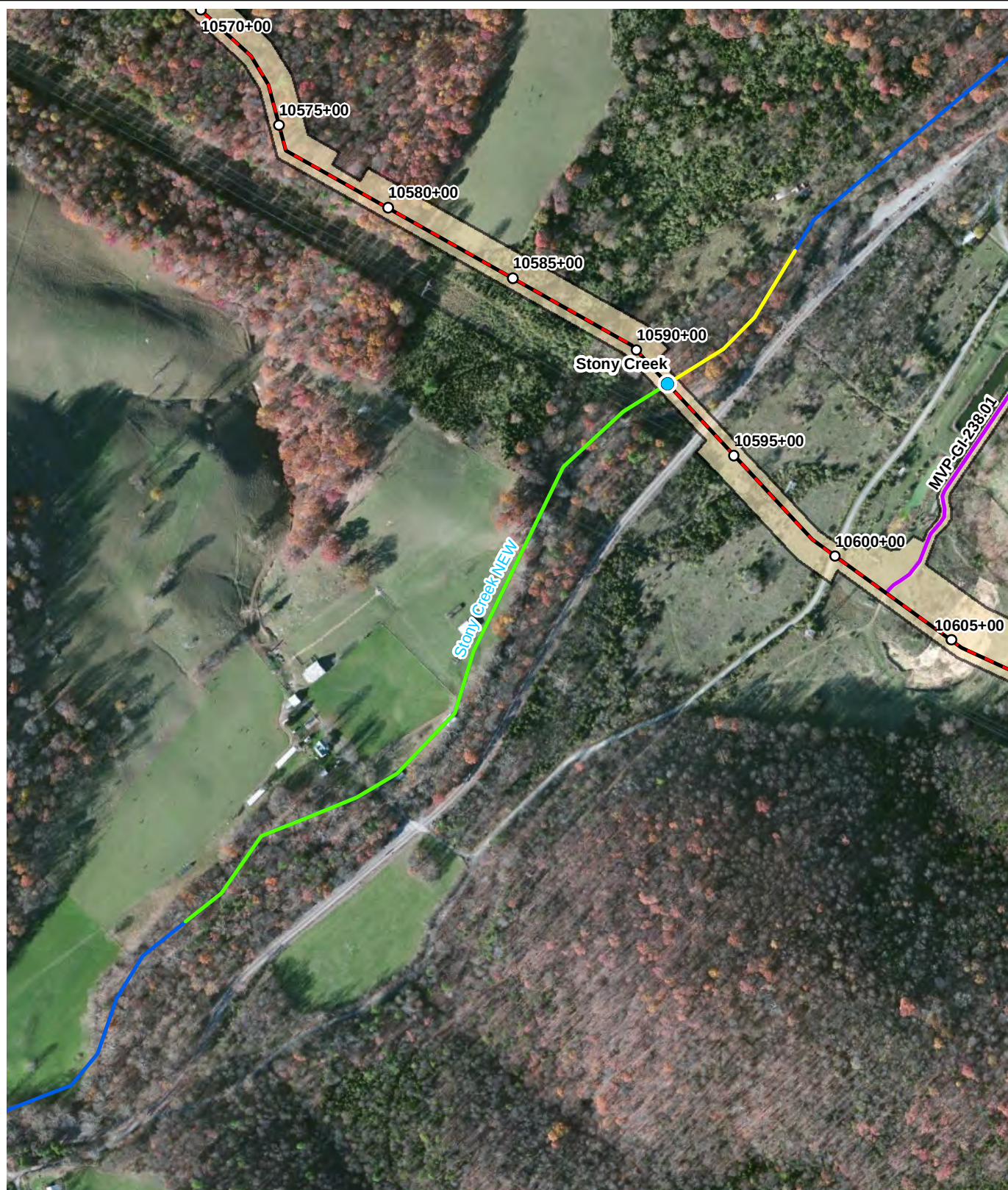
- Stream Crossing
- Downstream Flowpath
- Downstream Action Area (800m)
- MVP Post IFC Access Roads
- Upstream Action Area (200m)
- Limits of Disturbance (LOD)



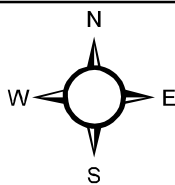
Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Hominy Creek 2



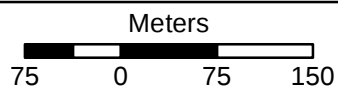
Base Map: ESRI "World Imagery (Clarity)";
accessed 10/25/2018



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| ○ Station | Upstream Action Area (200m) | MVP Post IFC Access Roads |
| ● Stream Crossing | Candy Darter Stream (Extant) | Limits of Disturbance (LOD) |
| Downstream Action Area (800m) | MVP Post IFC Centerline | |



Mountain Valley Pipeline Candy Darter Stream crossing Exhibit; Stony Creek



Base Map: ESRI "World Imagery (Clarity)";
accessed 10/25/2018

Previously Included in Table 1?	Facility	Waterbody	MP	County	Crossing Method	ROW Width (Ft)	Temporary Impacts within Construction Limits (acres)	Blasting (Yes or No)	Candy Darter Impacts?	Candy Darter Extant Stream?	Within 800m of Candy Darter Extant Stream?	Candy Darter Extant Stream length (m) (200m US + 800m DS buffers)	Avg Stream Width (m)	Estimated Acreage of Candy Darter Extant Effects Area	Notes/Rationale
Yes	Access Road	Strouds Creek	110.1	Webster, WV	Existing single-span bridge	40	0	No	No impact (>800m away)	No	No	0	0	0.00	Remove from Table 1: Strouds Creek is 1) not identified as a candy darter extant stream and 2) is a perennial, direct tributary to the Gauley River (candy darter extant stream). The Project crossing of Strouds Creek is 975m upstream of mouth with Gauley; therefore the crossing is more than 800m upstream of extant population.
Yes	Pipeline	Strouds Creek	110.1	Webster, WV	Open-Cut Dry	75	0.0594	YES	No impact (>800m away)	No	No	0	0	0.00	Remove from Table 1: Strouds Creek is 1) not identified as a candy darter extant stream and 2) is a perennial, direct tributary to the Gauley River (candy darter extant stream). The pipeline crossing of Strouds Creek is 975m upstream of mouth with Gauley; therefore the crossing is more than 800m upstream of extant population.
Yes	Pipeline	Big Beaver Creek	114.3	Nicholas, WV	Open-Cut Dry	75	0.0625	YES	No impact (>800m away)	No	No	0	0	0.00	Remove from Table 1: Big Beaver Creek is 1) not identified as a candy darter extant stream and 2) is a perennial, direct tributary to the Gauley River (candy darter extant stream). The pipeline crossing of Big Beaver Creek is more than 4,300 meters upstream of mouth with Gauley; therefore the crossing is more than 800m upstream of an extant population.
Yes	Pipeline	Big Beaver Creek	116.2	Nicholas, WV	Open-Cut Dry	75	0.124	YES	No impact (>800m away)	No	No	0	0	0.00	Remove from Table 1: Big Beaver Creek is 1) not identified as a candy darter extant stream and 2) is a perennial, direct tributary to the Gauley River (candy darter extant stream). The pipeline crossing of Big Beaver Creek is more than 4,300 meters upstream of mouth with Gauley; therefore the crossing is more than 800m upstream of an extant population.
Yes	Pipeline	Gauley River	118.9	Nicholas, WV	Open-Cut Dry	75	2.1556	YES	POTENTIAL IMPACT	YES	YES	1000	45	11.12	Retain in Table 1: Gauley River is identified as a candy darter extant stream.
No	Access Road	Little Laurel Creek3	119.0	Nicholas, WV	Temporary single-span bridge	40	0	No	POTENTIAL IMPACT	No	YES	0	0	0.00	Retain in Table 1: Little Laurel Creek3 is 1) not identified in the original Table 1, 2) not identified as a candy darter extant stream and 3) is a perennial, direct tributary to the Gauley River. The Project crossing of Little Laurel Creek is within 30m upstream of mouth with Gauley; therefore impacts may potentially occur to an extant candy darter population. If an 800-m downstream buffer is applicable, then 770m of Gauley River is affected and average width of Gauley river is 45m. The level of instream impact (if any) is not currently known.
Yes	Access Road	Little Laurel Creek2	119.0	Nicholas, WV	Temporary single-span bridge	40	0.0249	No	POTENTIAL IMPACT	No	YES	0	0	0.00	Retain in Table 1: Little Laurel Creek2 is 1) not identified as a candy darter extant stream and 2) is a perennial, direct tributary to the Gauley River. The Project crossing of Little Laurel Creek is within 280m upstream of mouth with Gauley; therefore impacts may potentially occur to an extant candy darter population. If an 800-m downstream buffer is applicable, then 520m of Gauley River is affected and average width of Gauley river is 45m. The level of instream impact (if any) is not currently known.
Yes	Access Road	Little Laurel Creek1	119.0	Nicholas, WV	Temporary single-span bridge	40	0.0264	No	No impact (>800m away)	No	No	0	0	0.00	Remove from Table 1: Little Laurel Creek1 is 1) not identified as a candy darter extant stream and 2) is a perennial, direct tributary to the Gauley River (candy darter extant stream). The Project crossing of Little Laurel Creek is approximately 1,100 meters upstream of mouth with Gauley; therefore the crossing is more than 800m upstream of an extant population.
Yes	Pipeline	Jim's Creek	123.4	Nicholas, WV	Open-Cut Dry	75	0.0349	YES	No impact (indirect tributary)	No	No	0	0	0.00	Remove from Table 1: Jims Creek is 1) not identified as a candy darter extant stream and 2) is a perennial, direct tributary to Hominy Creek. Hominy Creek is not identified as a candy darter extant stream.
Yes	Pipeline	Hominy Creek	126.9	Nicholas, WV	Open-Cut Dry	75	0.0976	YES	No impact (candy darter population not present)	No	No	0	0	0.00	Remove from Table 1: Hominy Creek is 1) not identified as a candy darter extant stream and 2) is a perennial, direct tributary to the Gauley River. The Gauley River is a candy darter extant stream; however, the Gauley River is impounded (creating Summersville Lake) and Summersville Lake is a candy darter extirpated section. Hominy Creek drains into Summersville Lake therefore Hominy Creek is not a direct tributary to a candy darter extant stream section.
Yes	Access Road	Hominy Creek	127.0	Nicholas, WV	Existing single-span bridge	25	0	No	No impact (candy darter population not present)	No	No	0	0	0.00	Remove from Table 1: Hominy Creek is 1) not identified as a candy darter extant stream and 2) is a perennial, direct tributary to the Gauley River. The Gauley River is a candy darter extant stream; however, the Gauley River is impounded (creating Summersville Lake) and Summersville Lake is a candy darter extirpated section. Hominy Creek drains into Summersville Lake therefore Hominy Creek is not a direct tributary to a candy darter extant stream section.
Yes	Pipeline	Stony Creek	200.4	Giles, VA	Conventional Bore	75	0	No	POTENTIAL IMPACT	YES	YES	1000	9	2.22	Retain in Table 1: Stony Creek is identified as a candy darter extant stream.