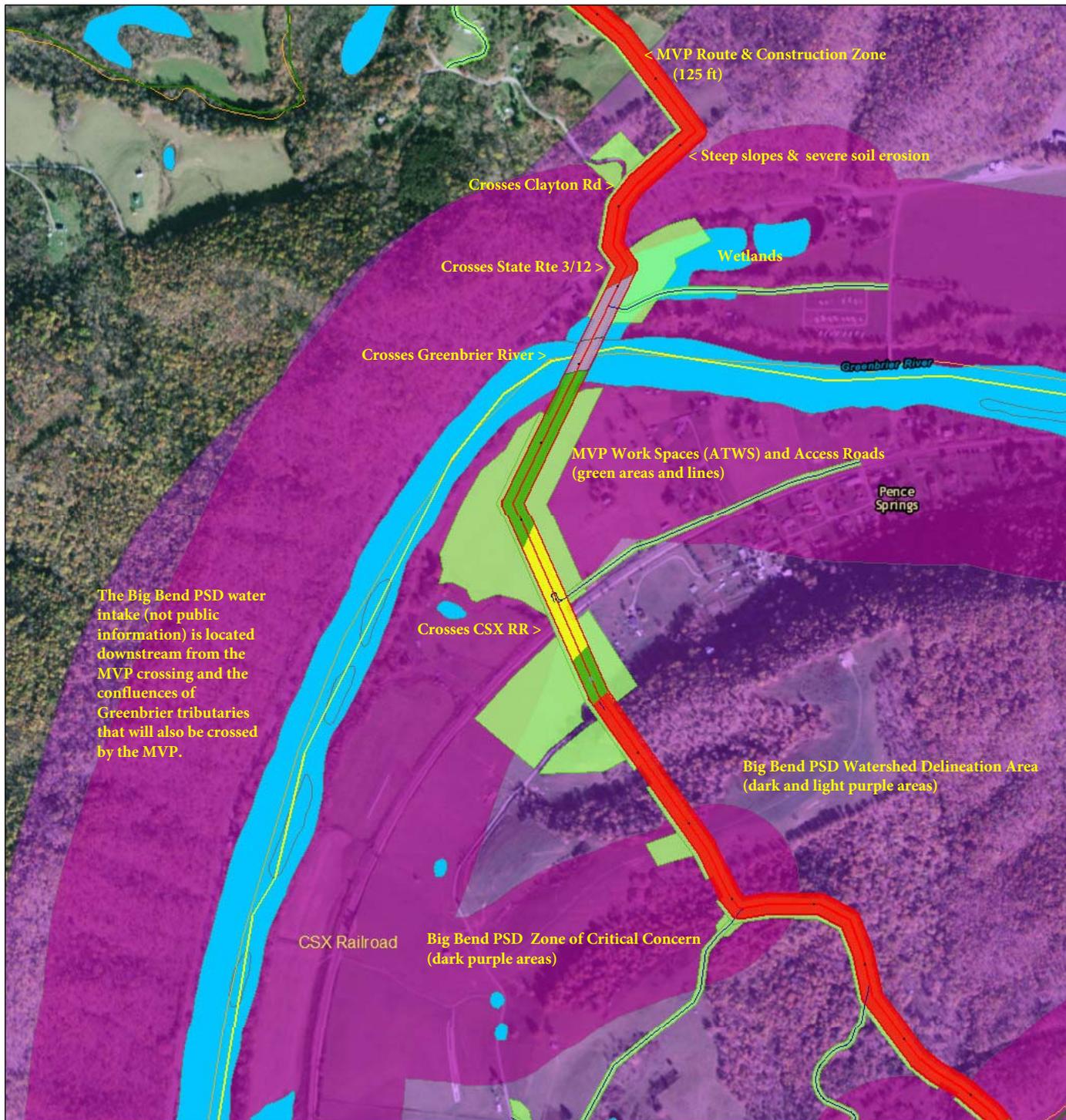


Figure 1. Greenbrier River Crossing: Soil Erosion, Big Bend PSD Watershed Impacts



June 21, 2016

Annotations in yellow added to Figure

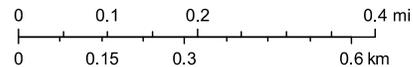
1:9,028

Mileposts_for_Proposed_Route

- Tenth-mile
- Mile

100k_Flowlines_pipeline_counties_streamorder

- 3
- 5



Proposed_Route

MVP_proposed_route_buffer

Access_Roads

MVP_Proposed_Route_Soil_Erosion

- Severe
- Moderate
- Slight
- Not rated

Wetlands_Dissolve

ZCC

BigBend_WSDA (2016 SWPP Watershed Delineation Area)

MVPtemp_impact_diss (Construction zone, Access roads, ATWS sites)

Source: ICWA Interactive Environmental Map
<http://indiancreekwatershedassociation.org/icwa-interactive-environmental-map>

Description of Greenbrier River Crossing: Soil Erosion, Big Bend PSD Watershed Impacts

Figure 1. Greenbrier River Crossing: Soil Erosion & Big Bend PSD Watershed Impacts serves as one example of the need for the federal and state agencies to examine and evaluate the unique challenges and impacts that the MVP pipeline would impose on each stream, river, and wetland crossing—both those impacts specific to the stream itself and factors related to its broader context.

The Greenbrier River is the longest undammed river east of the Mississippi, and it is a popular tourist destination for fishing and canoeing. It is designated as a High Quality River by the West Virginia Department of Natural Resources (WVDNR). The proposed 270-foot open-trench crossing is likely to have a significant impact on the river. The proposed MVP route crosses the Greenbrier River at Pence Springs, Summers County, immediately after a steep descent from the north. The following are some of the interrelated impact issues revealed by the Environmental Impact Map:

- The Big Bend Public Service District intake is downstream of the MVP crossing, as well as the confluences of Greenbrier tributaries that will also be crossed by the MVP. (Note: PSD intakes are not publicly available information, and therefore do not show on the map.)
- MVP's proposed route from the ridge overlooking the Greenbrier River descends several hundred feet of extreme steep slopes (> 40%), and crosses the one-lane Clayton Road and State Route 3/12, the principal road between Alderson, Talcott, and Hinton. Construction is likely to close both roads, temporarily depriving residents of the Hungards Creek valley (beyond the area mapped) of both emergency services and everyday transportation.
- Severe soil erosion potential along the construction easement, as determined by slope and underlying soils, creates threats for significant stormwater run-off into the Greenbrier during and after construction, as well as the possibility of disastrous slope failures throughout the operational lifetime of the line, creating further hazards for transportation in the area.
- Severe erosion issues will also affect other areas such as Kelly Creek in the Zone of Critical Concern (ZCC) and Watershed Delineation Area (WSDA) for Big Bend Public Service District as the pipeline continues southeast into Monroe County. MVP's Resource Reports do not reflect the larger WSDAs stipulated in 2016 Stormwater Protection Plans.
- MVP access roads and work spaces total almost 36 acres in the crossing and Kelly Creek areas combined, cross 9 wetlands and 18 different streams, several more than one time.
- The pipeline will have to cross under the CSX railroad tracks.
- This map does not include reports of archeological findings near the crossing, noted in comments by individuals and by the Summers County Historic Landmark Commission and protected by NHPA from public disclosure.
- This map also does not report floodplain levels. On Friday, June 24, 2016, the Greenbrier River experienced flooding that totally immersed State Route 3/12 at the intended MVP crossing at Pence Springs, as well as much of MVP's planned ATWS and access roads.

Interactive Mapping elements used in Figure 1

Basemap: Imagery with labels

Layers: MVP proposed route, ROW (construction), Access roads, Soil Erosion Potential, MVP temporary impact (construction zone, access roads, temporary work spaces (ATWS)), Streams: 100k flowline, Impaired streams, Wetlands, Big Bend Water District Zone of Critical Concern (ZCC), Big Bend Watershed Delineation Area (WSDA)