



A Year of Large-Scale Pipeline Construction in Mountainous Regions of West Virginia and Virginia

What We Have Learned

Over the past year, West Virginia and Virginia have witnessed the beginning of a major buildout of pipeline infrastructure. Large natural gas pipelines up to 42 inches in diameter are being constructed across hundreds of miles of rugged and highly erodible terrain, crossing hundreds of rivers and streams in the process. The risks to our waters from these billion-dollar construction projects are significant.

Shorthanded state regulatory agencies struggle to monitor the hundreds of miles of construction, so nonprofit organizations - including Trout Unlimited (TU) and West Virginia Rivers - are working to fill the gap. To augment agency efforts, we are training volunteers to provide citizen oversight. The volunteer reports are vetted by organization staff, then passed on to relevant agency officials and tracked to ensure resolution.

In this first year of large-scale pipeline development in the central Appalachian states, citizens and agency staff have documented numerous pollution incidents on the Mountain Valley Pipeline, the Mountaineer Express, and the Atlantic Coast Pipeline. This report provides a snapshot of the impacts construction is having on streams and rivers - impacts that threaten critical habitat for aquatic species and clean water supplies for citizens, farms, and industry.

It is critical that we learn from the impacts observed over the past year, and chart a path forward that protects these valuable resources.

Why It Matters



The Allegheny and Blue Ridge mountains are a stronghold of the Eastern brook trout, a native species that supports a vibrant tourism economy.







Outdoor recreation generates **\$30B** in consumer spending and directly supports **300,000 jobs** in Virginia and West Virginia, according to the Outdoor Industry Association.



Many streams crossed by the pipeline routes are headwaters to larger rivers that provide **drinking water** to many millions of citizens.

Pipeline Status

-  pipeline length
-  stream crossings
-  reports of violations
-  notices of violation

Atlantic Coast Pipeline (ACP)



West Virginia, Virginia, North Carolina
604 miles | **1439** stream crossings | **127** citizen water quality monitoring sites
41 *WV Rivers / TU / Pipeline CSI citizen reports of violations | **4** agency notices of violation
 Construction on hold, pending court challenges

Mountaineer Express Pipeline (MXP)



West Virginia
170 miles | **817** stream crossings | **17** citizen water quality monitoring sites
5 *WV Rivers / TU / OVEC citizen reports of violations | **45** agency notices of violations
 Now in service

Mountain Valley Pipeline (MVP)



West Virginia, Virginia
304 miles | **1108** stream crossings | **58** citizen water quality monitoring sites
230 *WV Rivers / TU / ICWA citizen reports of violations | **35** agency notices of violations
 Construction in progress; construction across streams and public lands pending court challenges

*Beyond those tracked through the WV Rivers/TU Pipeline Monitoring program, citizen complaints may be reported via other programs or directly to the agency. The number of citizen reports correlates closely to the number of volunteer monitors and the stage of pipeline construction.

Sediment Entering Streams

The pictures below represent just a subset of the water quality impacts and violations resulting from pipeline construction over the past year. During the permit review process, pipeline companies assured regulators that these sorts of pollution events would be prevented by effective use of erosion and sedimentation practices and best management practices.



A sediment plume documented by DEP inspectors on Fish Creek resulting from pipeline construction in Marshall County caused by dewatering of flooded areas in the construction area. DEP inspectors issued a violation.



A tributary laden with sediment from pipeline construction runoff enters Blue Lick in Monroe County, WV. Documented by volunteers with the Indian Creek Watershed Association in July 2018 near the pipeline. Citizens have documented hundreds of impacts in Monroe County resulting in six of the violations issued by WV DEP.



Failed or Deficient Erosion Controls

ACP



Sediment-laden water bypasses erosion controls impacting Grassy Run in Upshur County, WV. This issue was documented by a local pipeline monitoring volunteer and resulted in a violation issued by WV DEP.



MVP



Concentrated runoff breaches a silt fence, erodes stream bank and enters Teels Creek in Franklin County, VA. Documented by Mountain Valley Watch volunteers along the pipeline.

Hillside Failures and Slips

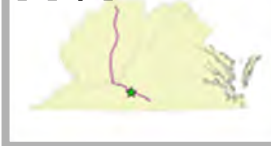


MXP



A major slip in Wirt County, WV on the pipeline route. Pipeline projects in the region, such as the Rover Pipeline, have continued to experience slips long after completion of the project.

MVP



A Franklin County, VA hillside fails during construction of the pipeline covering Cahas Mountain Road in approximately a foot of mud and impacting nearby Little Creek. The failure occurred on a 23% slope. Many segments of the ACP and MVP will traverse slopes of greater than 60%. *Photo taken by volunteers with the Mountain Valley Watch.*

Short-Term Recommendations for Regulators

- Enhance agency capacity for pipeline oversight by immediately dedicating more staff and additional resources to inspections.
 - Implement restrictions on the number of miles under construction simultaneously, and strictly enforce restoration timelines. This would limit how much of the right-of-way is clear of permanent erosion controls and/or vegetation, and at risk of stormwater sedimentation events.
 - Require additional erosion control measures at the ends of slope breakers - ridges or channels that divert stormwater away from sensitive waterways. The lack of this type of control has been cited by state inspectors as a common source of sediment-laden water entering streams.
 - Require the use of more protective controls, such as sediment traps, on steep slopes where so much of the erosion control problems originate.
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Long-Term Recommendations for Regulators

Over the long term, we encourage regulators to re-evaluate permitting of pipeline infrastructure projects in Central Appalachia going forward.

- Require site-specific, stream-by-stream crossing plans, so regulators can ensure proper erosion control methods to protect water quality. Require enhanced best management practices on sensitive waters, such as wild trout streams.
 - Require companies to fully evaluate the use of trenchless stream crossings that do not require disturbing streambeds, and justify decisions to use other methods.
 - Identify site conditions that are not suitable for pipeline construction, such as areas with critical natural resources, and require rerouting.
 - Increase fines and permit fees. The amount of agency staff time needed to oversee these large-scale construction projects is immense. Small fines on billion-dollar projects do little to encourage sound construction practices.
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