Examples of Maryland Forest Loss and Stream Ecosystem Impacts by Engineered Stream Restoration Work

Healthy Stream Valley, without Stream Restoration Work – Prince George's County

Guilford Woods Stream by https://saveguilfordwoods.wordpress.com/

Font Hill – Howard County

Before Stream Restoration Work (2017) –
Wooded stream banks useful for run-off and stream surge control

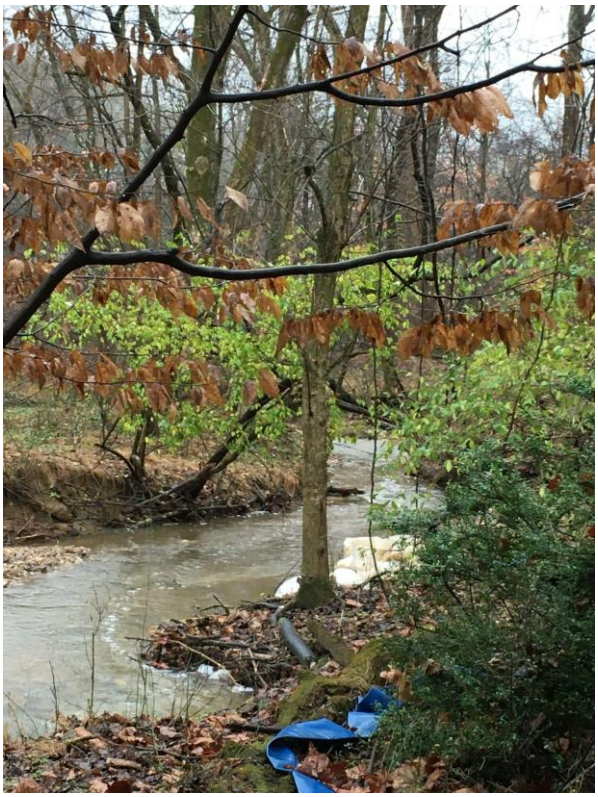
https://data.howardcountymd.gov/InteractiveMap.html?Workspace=HistoricAerials, 2017 Aerial Photo

After Stream Restoration Work (2022) –
Heavy tree loss which contributes to stormwater surges

https://data.howardcountymd.gov/InteractiveMap.html?Workspace=HistoricAerials 2022 Aerial Photo

Little Patuxent UT #1- Howard County

Before Stream Restoration Work – Heavily vegetated and wooded. Blue hose to pump out stream water for the upcoming restoration work is visible.



After Stream Restoration Work – Rich riparian ground cover and trees have been stripped from the stream banks.

During Stream Restoration Work 1 (Spring 2021) –
Heavy tree loss.

During/After Stream Restoration Work 2 (Spring 2021) –
Heavy tree loss, armored stream banks

Before and After Stream Restoration Work –
Negative impact on stream bank run-off, including rocks, silt, and sediment accumulation, following first large rainfall (~1 year after tree loss).

Before

After

Little Patuxent UT # 2, Howard County (Before photo not available)

During Stream Restoration Work 1 –
Clearance of mature trees.

During Stream Restoration Work 2 – Mature tree removal.

During Stream Restoration Work 3 –
Riparian zone cleared of natural vegetation.

During Stream Restoration Work 4 –
Natural benthic habitat is removed and replaced with new stream substrate material that is less effective for supporting diverse stream life.

Little Patuxent #3 (Before photo not available)

After Stream Restoration Work –
Established vegetation and trees that help slow stream flow rates and run-off removed making stream banks vulnerable to run-off and erosion.

Miller Run-Baltimore County (Before photo not available)

After Stream Restoration Work 1 –
Trees cleared and replaced with saplings.

After Stream Restoration Work 2 – Riparian forest removed.

Solitaire Court- Montgomery County

Before Stream Restoration Work-see link

During Stream Restoration Work--
Stream no longer continuous, heavy tree removal, artificial substrate to stream with step pools.

After Stream Restoration Work 1 – Mature trees removed and replaced with saplings. Step pools installed.

After Stream Restoration 2 –
Vegetation dominated by invasive plants.

After Stream Restoration 3 –
Embankment engineering subject to erosion and failure.

Watkins Mill/Travis Ave Stream Restoration & Outfall-Montgomery County

Before Stream Restoration Work
– A well-vegetated and wooded stream corridor.

After Stream Restoration Work 1
– Loss of mature trees and native vegetation and healthy soil.

After Stream Restoration Work 2 –
Re-engineered streambanks susceptible to blow-outs and heavy erosion.

After Stream Restoration Work 3 –
Re-engineered streambanks susceptible to blow-outs and heavy erosion.

Upper Watts Branch - Montgomery County

During Stream Restoration Work - An example of the heavy engineering equipment and process disrupting soil structure and wildlife habitat.

Whetstone Run/Asbury Methodist Village - Montgomery County

After Stream Restoration Work – Note magnitude of natural landscape alteration in step-pool installation. Step pools interrupt fish and other aquatic species passage.

St. Charles Parkway Stream-Charles County

Before Stream Restoration Work –

Well-established vegetation moderates stream flow and supports diverse aquatic life.

https://www.charlescountymd.gov/our-county/infrastructure-capital-services/npdes-project/st-charles-parkway#ad-image-0

After Stream Restoration Work 2 –

Heavy loss of mature trees.

After Stream Restoration Work 3-

More Tree Removal

https://www.charlescountymd.gov/our-county/infrastructure-capital-services/npdes-project/st-charles-parkway#ad-image-0

Other Stream Restoration Projects of Concern (Photos available)

Stony Run-Baltimore City
Ruth Swann Park-Charles County
Bear Branch-Prince George's County
Jones Mill Road-Montgomery County
Lower Booze Creek-Montgomery County
Dead Run-Baltimore County
Scotts Level Branch-Baltimore County
Tinkers Creek-Prince Geoge's County
Beaver Creek-Washington County
North Creek-Montgomery County
Diamond Farms Park-Montgomery County