

Collington Branch – The Need for Stream Restoration



The photos show pre-restoration conditions, demonstrating the clear need for stream restoration. This project will include upland stormwater management components.

Little Paint Branch Tributary Stream Restoration – The Need for Stream Restoration



The photos show pre-restoration conditions, demonstrating the clear need for stream restoration including deeply incised stream banks. This project will include upland stormwater management components.

Bacon Ridge Branch Stream Restoration – Pre-Restoration Conditions



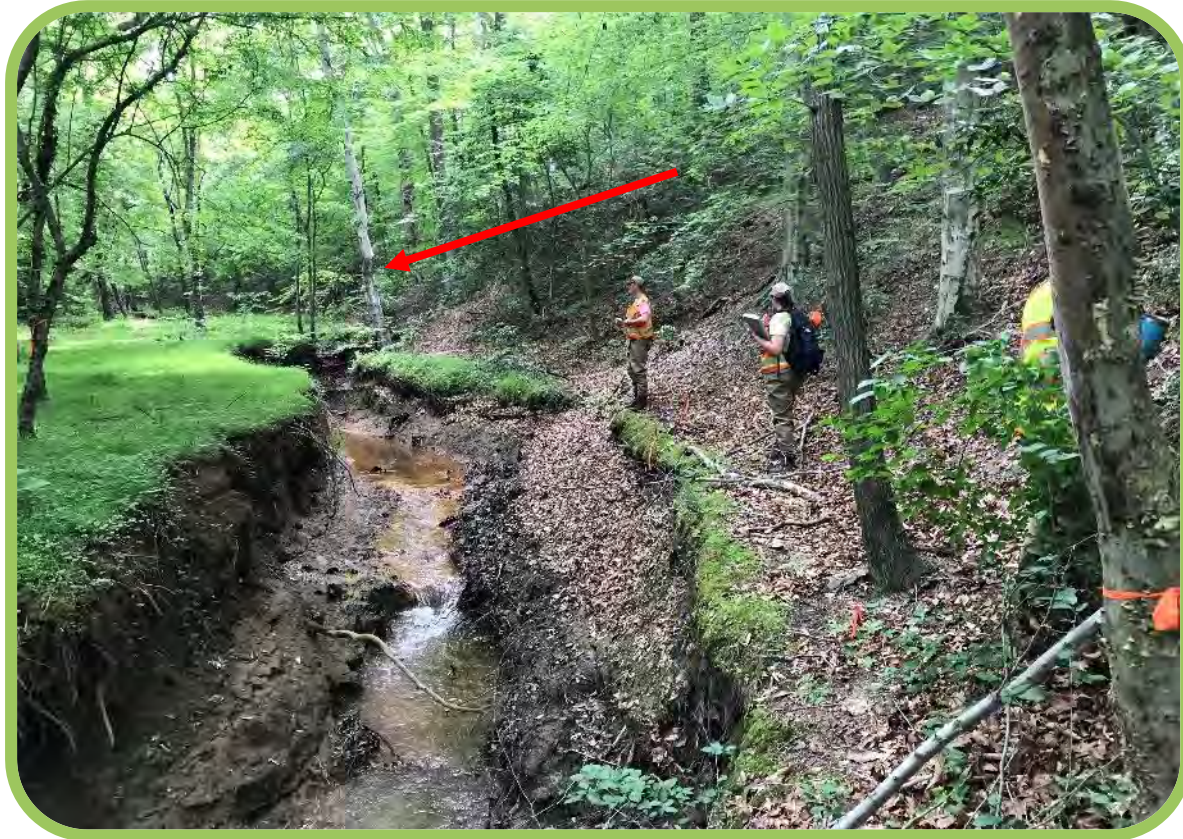
These photos demonstrate the severely degraded condition of these streams and the need for restoration.

Note the deep incision and vertical banks. Streams were actively eroding from both bed incision and bank widening, due to intensive historic land use.



The large headcuts destroyed one critical pedestrian bridge used for access and severely threatened two others. The conditions also posed a safety hazard to the camp run on-site.

Bacon Ridge Branch Stream Restoration



Photos depict the stream system before (left) and after (right) restoration. The restoration corrected deep incisions and reconnected the stream to its floodplain. This project uplifted water quality, restored a large forested floodplain (hydrology and vegetation), provided educational opportunities, and restored breeding habitat for yellow perch.

Bacon Ridge Branch Stream Restoration

These photos show the stream corridor before (top) and after (bottom) restoration. The stream was realigned and reconnected with its floodplain.



Note the surgical construction technique that maximized tree conservation and forest restoration.

Bacon Ridge Branch Stream Restoration – Biological Uplift

The restored stream and floodplain generated uplift in local biodiversity, including Forest Interior Dwelling Species (“FIDS”) and yellow perch breeding activity, among others. Restoring the stream within the forested system enhanced the habitat for these species.

Species Observed Post-Construction

- Great blue heron
- Mallard and wood duck
- Red-tailed hawk
- Wild turkey
- Bald eagle
- Spring peeper
- Two lined salamander
- Wood frog
- American toad
- Eastern ratsnake
- Snapping turtle
- Box turtle
- Copperhead snake
- Beaver
- White-tailed deer
- Raccoon
- Fish throughout project area



Two lined Salamander (top), Yellow Perch Egg Mass (middle), and Beaver Activity (bottom)

FIDS Observed Post-Construction

- Barred owl
- Red-shouldered hawk
- Northern parula
- Wood thrush
- Pileated woodpecker



White-breasted Nuthatch (left) and Wood Thrush (right)

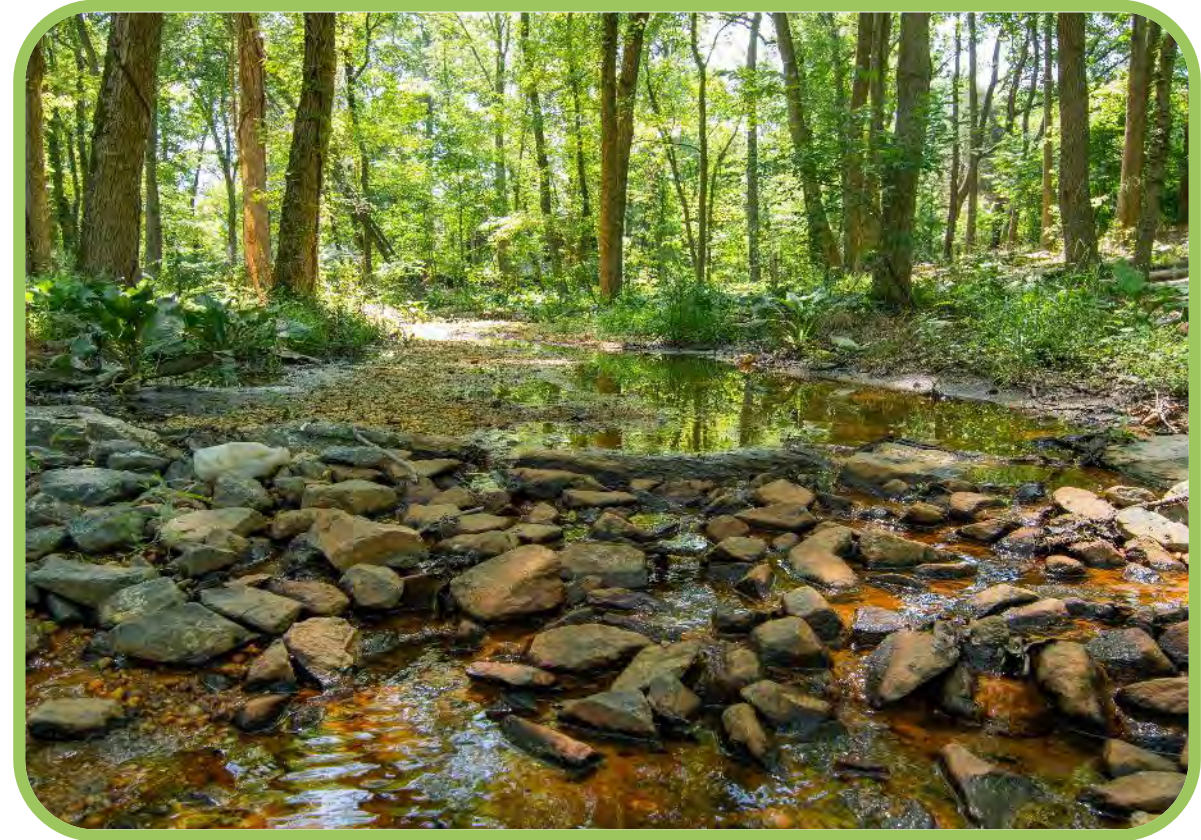
Tinkers Creek Stream Restoration



Photos show this stream reach before (left) and after (right) restoration. The truck shown was removed along with tons of other garbage and debris. The stream was stabilized, realigned, and restored habitat structure and function.

The project protected built infrastructure and reduced the flood surface elevation in the project corridor.

Tinkers Creek Stream Restoration



Photos depict the stream system before (left) and after (right) restoration. The restoration reduced planned impacts and installed a grade control to reduce erosion. The channel aggraded upstream as a result and is now functioning as a stable wetland complex.

Muddy Creek Stream Restoration



Photos depict the stream system before (left) and after (right) restoration. The restoration stabilized the stream, preventing further degradation that threatened on-site historic structures. The project provided flood attenuation, aquatic and terrestrial habitat improvements, and educational opportunities for this children's camp.

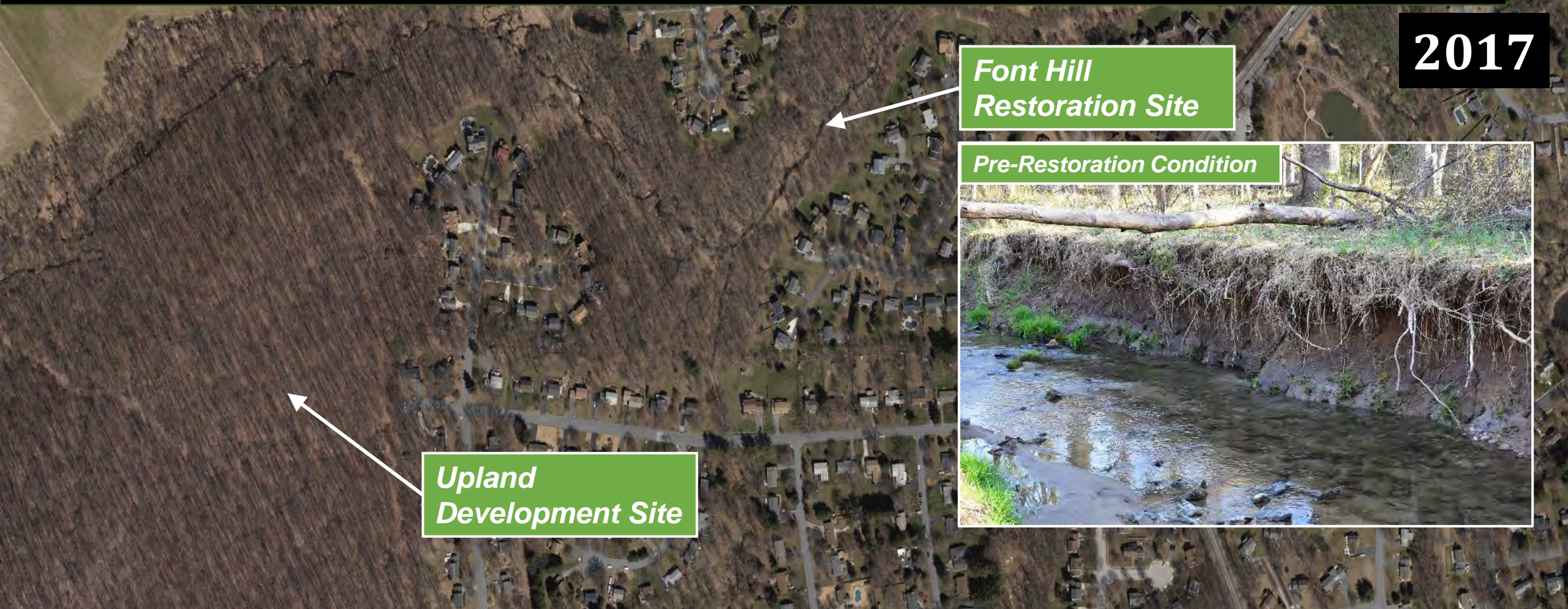
Muddy Creek Stream Restoration



Photos depict the stream system before (left) and after (right) restoration. The restoration provided flood attenuation and habitat improvements for a population of a Federally listed (endangered) species of reptile and breeding populations of brook and brown trout. Longhorn cattle activity degraded the stream and wetland complex. Cattle fencing around the stream excluded livestock impacts from threatening the protected species and degrading the restored system. The project restored forested habitat and integrated it with the surrounding forest.

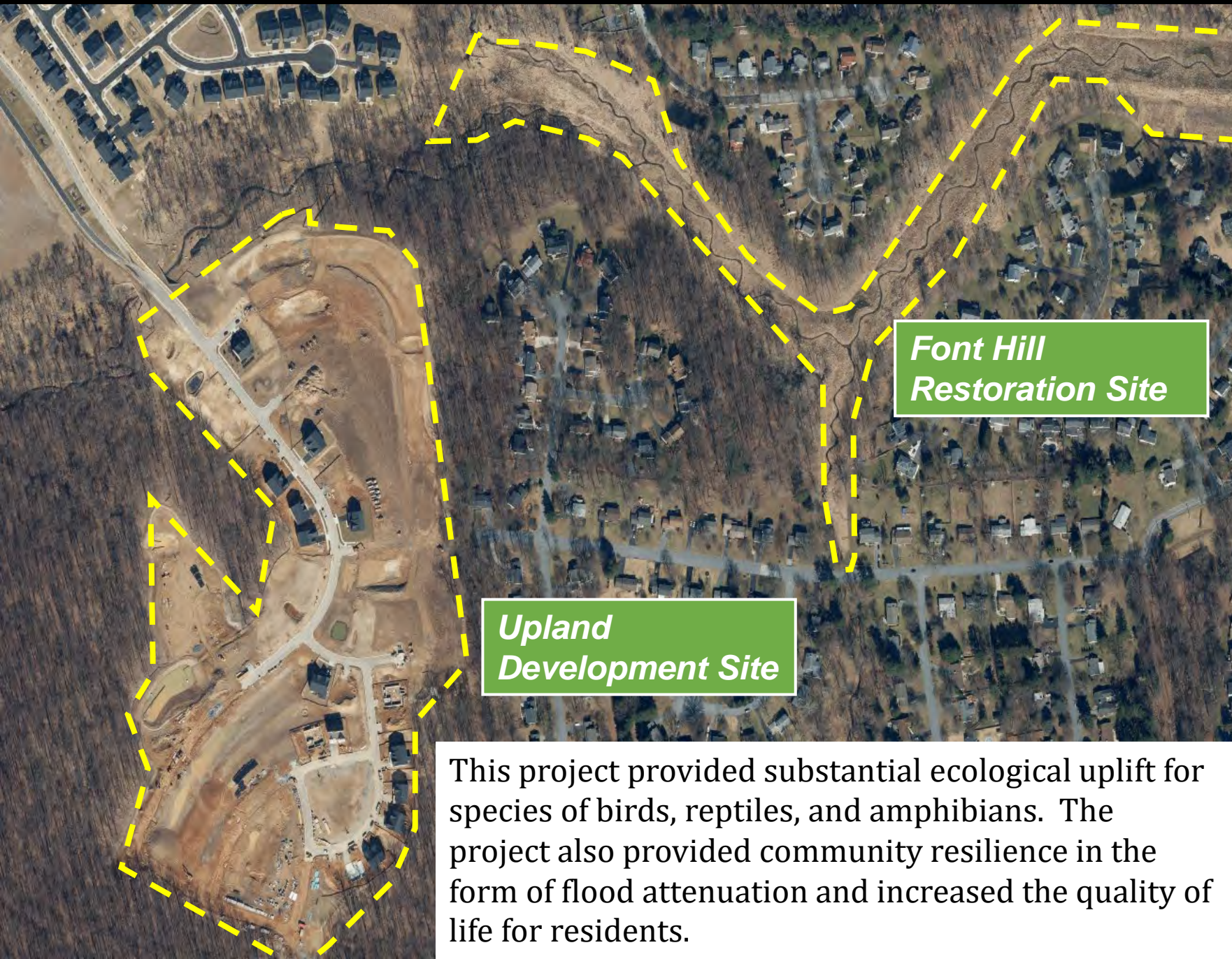
Font Hill Stream Restoration Project

2017



These slides depict a before and after sequence for the Font Hill Stream and Wetland Restoration Project. The background photos show a temporal progression where hundreds of acres above this project were clear cut for development juxtaposing a temporary impact to install a very beneficial integrated stream and wetland project with permanent forest loss.

2022



Post-Restoration Condition



Font Hill Restoration Site

Upland Development Site

This project provided substantial ecological uplift for species of birds, reptiles, and amphibians. The project also provided community resilience in the form of flood attenuation and increased the quality of life for residents.