

Upper Christina River Stream Restoration Project

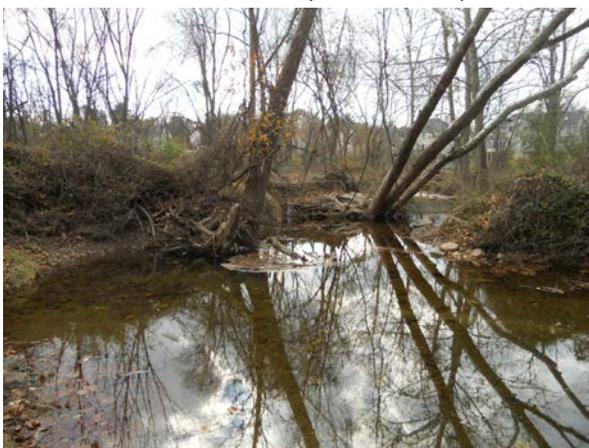
Approximately 3,600 feet of stream restoration is being proposed along the upper Christina River located west of Newark in the Timber Creek, West Branch and Christianstead subdivisions. Severe bank erosion is occurring along numerous properties adjacent to the stream channel. The banks are being undercut, causing mature trees to fall into the stream channel. Tremendous sediment loads are being released into the waterway with every storm event, impairing habitat and creating high turbidity conditions in the water column.

Several property owners have contacted the Division of Watershed Stewardship and expressed their concerns about the loss of trees and property with no apparent end in sight. They have requested assistance from the Division of Watershed Stewardship to rectify the problems exacerbated by upstream development and increased amounts of impervious surface throughout the watershed.

Implementing the appropriate stream restoration techniques will help stabilize the stream banks resulting in reduced sediment and nutrient loading to the Christina, improvements to habitat and water quality, and will allow the channel to be resized for the flow volumes that pass through the systems during average storm events. Bank-toe boulder protection and vegetative plantings, along with other stream restoration construction techniques, will be utilized to stabilize the degrading stream banks and improve habitat and water quality and reduce the loss of property.



The lack of proper riparian buffer vegetation and maintenance is evidenced by lawn grass being cut to the edge of the bank. The shallow root systems of the plants cannot hold the soils in place.



Stream bank erosion and bank undercutting has caused numerous mature trees to fall into the stream as evidenced by the photo above (left). Exposed roots (right) depict the large volume of topsoil that has been removed by stream erosion, jeopardizing the fate of mature trees as shown in the photo.



A deeply-incised stream channel and vertical stream banks along the Upper Christina River. Excessive volumes of sediment are being deposited into the stream channel resulting in the loss of property and wildlife habitat. In some areas along the Upper Christina dwellings are being threatened due to the rapidly-eroding stream banks.



The unstable nature in this reach of the Upper Christina River is demonstrated by the in-stream sediment bars that have formed. The overabundance of bed load material deposited in the center of the channel is shown above.