

# Site 5

## EXISTING



## PROPOSED



Lititz Run Riparian Park, Lititz PA

Top: Butterfly Acres, Lititz PA

Bottom: Susquehanna Bank Water Street, Lititz PA

**Location:** This site is located on the Lebanon Co-Tech School property immediately downstream of Metro Drive. The site is currently developed as a wetland with the Main Stem Quittapahilla running through the site. The site is bounded on the north by industrial, on the west by a prison and by the Vo-Tech school on the south. The wetland is directly adjacent to Route 422.

**Description:** The site is currently developed as a large functioning wetland-wildlife area. There is a pond, boardwalks, educational signs and wetlands. The site is handling stormwater inflows from the Vo-Tech school as well as from a rock-lined channel inputting stormwater from the industrial area. The wetland vegetation is dominated by cattails and lacks diversity. There are few trees. The Quittapahilla enters the wetland site under Metro Drive, from the southeast.

**Potential:** Wetland enhancements would greatly benefit this existing BMP. The wetland is well positioned to handle stormwater and improve water quality of the Quittapahilla prior to it flowing through the lined channel through the City of Lebanon. Wetland enhancement could include invasive species management, planting of more trees and upper-canopy species, expansion of the wetland and stream incorporation. The wetland could be expanded to the east towards Metro Drive. Native no-mow areas or meadows could be implemented to replace the mowed lawn on the southwest corner of the site near the pavilion. The currently stone-lined channel could be converted to a bioswale to convey the stormwater from the industrial areas to the wetland. A restoration could better incorporate the Quittapahilla into the wetland, creating greater sinuosity of the channel, increasing the number of wetland pockets and improving the riparian buffer along the stream.



# Site 3

## EXISTING



## PROPOSED



Lititz Run, Lititz PA

**Location:** This site is located along the main stem Quittapahilla Creek immediately downstream of Chestnut Street. The bridge at Chestnut Street is out and the road is closed, due to bridge damage. The site is bounded by agricultural properties to the south and residential and commercial properties along Route 422 to the north.

**Description:** The site is currently mowed floodplain with scattered trees. There is not a significant mature canopy along most of the reach. It is adjacent to a sloping agricultural field under cultivation. The Quittapahilla Creek is unstable throughout the entire reach, with steep, raw eroding banks. The banks are undercut and contributing significant amounts of sediment to the stream. The Chestnut Street Bridge is closed, with visible storm damage to the concrete bridge. There is debris accumulating on the wire fence that has been put in place to close the road, evidence of storm events that cause the stream to flow overtop the bridge. The streambed substrate is sediment-laden and lacking aquatic habitat.

**Potential:** The site would be very well suited for a complete floodplain restoration. A restoration would remove significant amounts of sediment that is being contributed to the Quittapahilla. Improvements could include restoration of the banks to their historic elevation through removal of legacy sediment and implementation of riparian buffers, wetland pockets, & in-stream habitat structures. A restoration would increase the flood storage on-site as well as potentially provide regional storage. Unlike site 2, this site does not already have a mature riparian buffer and canopy, which would make it a more qualified candidate for a restoration. The site is in a prime location, directly downhill of an agricultural field. Improvements could help to filter nutrient runoff from the field before entering the Quittapahilla. The site has demonstrated its need for restoration, evident from the road closure and bridge failure due to flooding.



# Site 2

## EXISTING



## PROPOSED



Lititz Run, Lititz PA

**Location:** This site is located along the main stem Quittapahilla Creek immediately downstream of Chestnut Street. The bridge at Chestnut Site 2 is located on the main stem Quittapahilla Creek immediately downstream of the concrete flume and upstream of the 22nd Street Bridge. It is bounded by commercial properties along Route 422 to the north, including a mini golf course, and Chestnut Street to the south. The site is currently forest that has some impact from dirt bikes.

**Description:** The Quittapahilla Creek is very unstable throughout this reach. The reach is approximately 1,700' in length, flowing with minor sinuosity through mature canopy. The banks are steeply eroded, undercut and unvegetated, approximately 5' in height in most places. The sediment-laden floodplain is highly disconnected and the stream over widened through the entire reach. There are a few large debris jams as well as large gravel bars. One outfall empties into the Quittapahilla from Chestnut Street, and an identified stream enters from the north. The floodplains on both sides of the stream show signs of recent flooding.

**Potential:** The site would be very well suited for a complete floodplain restoration. The site is receiving multiple stormwater inflows which could be better managed and treated. The site has potential for a future trail system along this reach. A restoration would remove significant amounts of sediment that is being contributed to the Quittapahilla. A restoration would increase the flood storage on-site as well as potentially provide regional storage. Improvements could include restoration of the banks to their historic elevation through removal of legacy sediment and implementation of riparian buffers, wetland pockets, & in-stream habitat structures. A potential downside is that a mature, dense canopy already exists along the Quittapahilla throughout this reach which would have to be removed through a complete restoration.