



# Chiques Creek Watershed Action Plan

## Watershed Assessment | Restoration Plan

### Project Description

LandStudies worked with the Susquehanna River Basin Commission (SRBC), the Penn State University Agriculture and Environment Center (AEC), and municipalities to develop an inventory of potential urban/ suburban Best Management Practices (BMPs) and restoration projects that have the potential to be implemented within the Chiques Creek Watershed. This effort built upon the preliminary Watershed Action Plan (WAP) prepared by LandStudies, which identified sediments and nutrients as prime causes of the impairment, classified stream types, determined stable channel dimensions, and identified potential restoration projects.

This WAP served as a critical component to the TMDL alternative that was developed by PA DEP and SRBC for the Chiques Creek Watershed. The inventory effort focused on regulated urbanized areas where municipalities will need to implement water quality improvement projects to meet MS4 permit requirements. Nutrient and sediment load reductions were estimated for over 90 potential BMP sites, and unit costs were used to estimate implementation and maintenance costs. A spreadsheet planning tool was developed that allows potential sites to be sorted by municipality, cost per pound of sediment or nutrients reduced, or total sediment or nutrient load reduced. This can be used to assist with selecting BMP sites that can provide the required load reductions in a cost effective manner. Concept plans were also developed for two of the high-ranking sites for further illustration of potential BMP implementation.

### Services

Cost Estimate | CBPRP/TMDL Plans | Stormwater BMPs | Pollutant Modelling

Client: Susquehanna River Basin Commission (SRBC)  
 Location: Chiques Creek Watershed, Lancaster County, PA



Bio-swale Retrofit Concept Plan



Completed Floodplain Restoration at Logan Park



(717) 627-4440  
 315 North Street  
 Lititz, PA 17543  
[www.landstudies.com](http://www.landstudies.com)