July 2015

CHIQUES CREEK RESTORATION INITIATIVE

Information Sheet

BACKGROUND

In the most recent list of water quality assessments released by the Pennsylvania Department of Environmental Protection (PADEP) as required by the Clean Water Act, approximately 50 miles of streams within the Chiques Creek Watershed in Lancaster County were listed as impaired. Most of this impairment was caused by excessive sediment and nutrients in the streams.

Over the years, PADEP has focused on watershed management techniques and processes that take a comprehensive approach to water pollution control to address polluted runoff or nonpoint source pollution, as well as point sources of pollution. After water quality problems are identified, a planning process occurs to develop strategies that can successfully address and correct water pollution problems in the watershed. Pennsylvania is using this process, in conjunction with federal Clean Water Act requirements, for establishing Total Maximum Daily Loads, or TMDLs, to clean up polluted streams so that they meet water quality standards.

TMDLs can be considered to be a watershed budget for pollutants, representing the total amount of pollutants that can be assimilated by a stream without causing impairment or water quality standards to be exceeded. The TMDL process allocates the amount of pollutants that can be discharged into a waterway from each category of pollutant source. Once a TMDL is approved, it is often left to the local watershed groups and citizens to develop an implementation plan for TMDL with PADEP assistance.

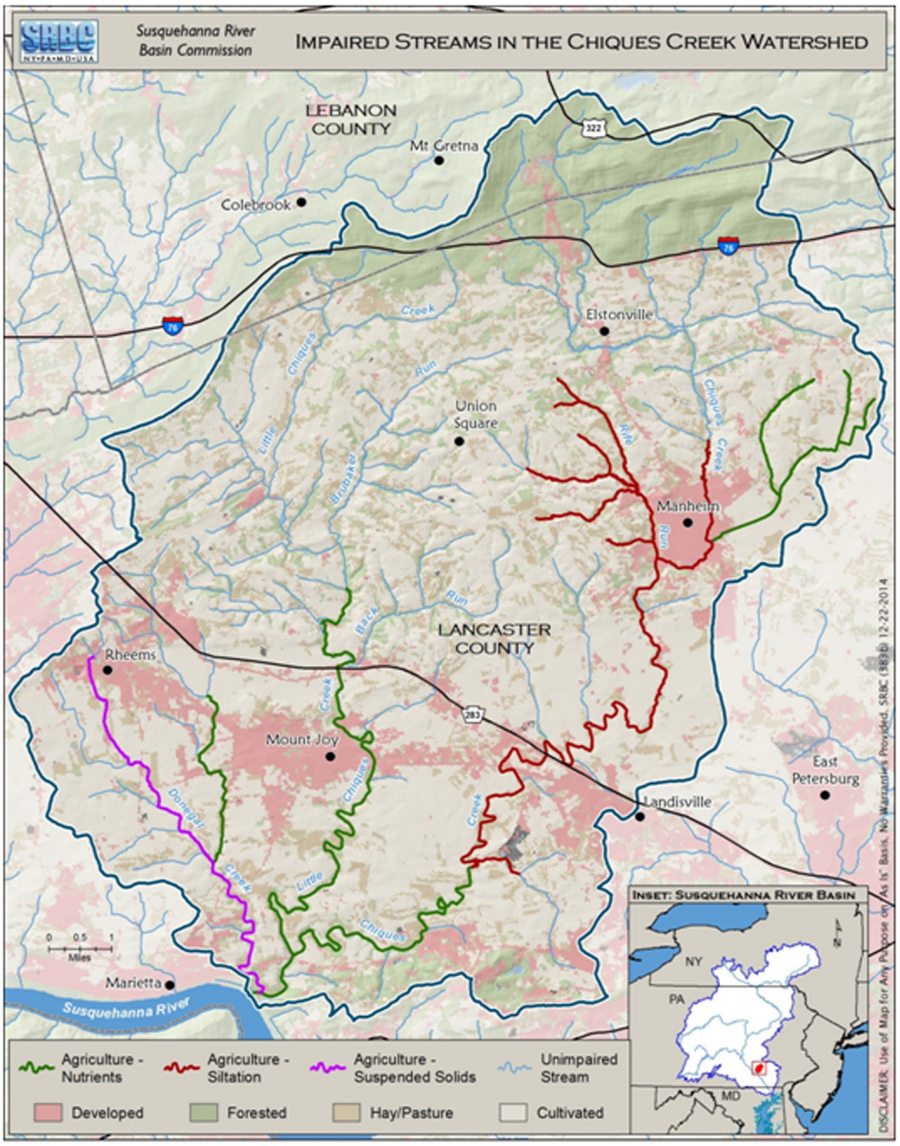
TMDL ALTERNATIVE

Interested partners and stakeholders will work together to develop an alternative approach to traditional TMDL development for Chiques Creek Watershed. This pilot process will be a comprehensive effort to understand nutrient and sediment sources, identify tools and solutions to diminish inputs, implement and/or provide technical/financial assistance to implement projects, and monitor effectiveness of project implementation.

Throughout the process, checkpoints will be established to evaluate progress and make adjustments to the approach in support of the adaptive management model. Upon successful completion, the model will be implemented in other areas.

Timeline

- 2014 — Began background data collection to assess current state of Chiques Creek Watershed (e.g., continuous water quality monitoring, macroinvertebrate collections).
- Spring 2015 — Compile existing data on current BMPs, local "hotspots," etc. through stakeholders and public input.
- Summer 2015 — Meet with the public to present restoration effort and to solicit unknown BMP reporting.
- Fall 2015 — Hold focused workshops on monitoring efforts, modeling, permitting, and other issues.
- Winter 2015 — Model watershed conditions and develop BMP strategy.
- Summer 2016 — Draft Implementation Plan
  - » Evaluate existing BMPs to assess progress to date
  - » Identify optimal BMP scenarios to maximize efforts/funds
  - » Develop planning/tracking tool



Chiques Creek Watershed - Impaired Streams

CHIQUES CREEK PROFILE

- Chiques Creek (known as Chickies Creek until 2002) is a 31.6-mile-long tributary of the Susquehanna River in Lebanon and Lancaster counties, Pennsylvania.
- Chiques Creek Watershed is 65 square miles in size. Nearly 75 percent is in agricultural use.
- The main sources of impairment are excess nutrients (phosphorus and nitrogen) and sediment loads from agricultural activities.
- Its tributaries include:
  - » Donegal Creek
  - » Little Chiques Creek
  - » Dellinger Run
  - » Rife Run
  - » Boyers Run
  - » Shearers Creek (cold water fishery)

OUTCOME

The project partners will develop an implementation plan to guide future remediation efforts within the watershed with the goal of restoring impaired stream reaches.

PARTNERS

Susquehanna River Basin Commission

Lancaster County Conservation District

Penn State Agriculture and Environment Center

Pennsylvania Department of Environmental Protection

Local stakeholders (to be identified)

CONTACT INFORMATION

The Susquehanna River Basin Commission is assisting with the coordination of project activities. For more information, please contact:

Tyler Shenk, SRBC

email - tshenk@srbc.net

(717) 238-0423

For more information on the Chiques Creek Restoration Initiative, go to: *http://www.srbc.net/programs/chiques/chiques.htm*.