

West Branch Susquehanna Subbasin Year-1 Survey

EXECUTIVE SUMMARY

The West Branch Susquehanna Subbasin Year-1 Survey is a stream quality assessment based on one-time sampling of water chemistry, biological, and habitat conditions throughout the West Branch Subbasin from March to July 2009. Pollution concerns in this subbasin are mostly due to resource extraction activities as land use is mostly forested. Abandoned mine drainage (AMD) was the most prevalent pollution issue in addition to concern about impacts from atmospheric deposition. The 141 tributary and mainstem river sites that were sampled are listed in the appendix of the report along with location description information. These sites have a corresponding site number displayed on maps and tables in the report providing site specific information including water quality, biological, and habitat condition categories. Historical data from previous subbasin surveys at these sites in the West Branch Subbasin were compared to current conditions and improvement was noted. Approximately 46 percent of AMD-impacted sites had improved in the percentage of Ephemeroptera (mayflies) from 1994 to 2009. In particular, improvement in Ephemeroptera was observed in the West Branch mainstem from 2002 to 2009 in the section from Clearfield to Jersey Shore, Pa. Despite these improvements, the streams in the West Branch Subbasin continue to be more impaired than other subbasins throughout the Susquehanna River Basin.

INTRODUCTION

The Susquehanna River Basin Commission (SRBC) conducted a water quality and biological survey of the West Branch Susquehanna Subbasin from March to July 2009. This survey is part of SRBC's Subbasin Survey Program, which is funded in part by the United States Environmental Protection Agency (USEPA). The Subbasin Survey Program consists of two-year assessments in each of the six major subbasins (Figure 1) on a rotating schedule. This report summarizes the Year-1 survey, which consists of point-in-time water chemistry, macroinvertebrate, and habitat data collection and assessment of the major tributaries and areas of interest throughout the West Branch Susquehanna Subbasin. The Year-2 survey is being conducted in the Drury Run and Birch Island Run Watersheds from March to November 2010, focusing on abandoned mine drainage (AMD) impacts and restoration needs, particularly with regard to brook trout habitat. Previous SRBC surveys of the West Branch Susquehanna Subbasin were conducted in 1983 (McMorran, 1985), 1994 (data summarized in LeFevre, 2003), and 2002 (LeFevre, 2003). The 2009 survey was conducted in partnership with Trout Unlimited (TU) and the Pennsylvania Fish and Boat Commission (PFBC), which repeated methods and sites from historical surveys on the West Branch Susquehanna River previously done by U.S. Geological Survey (USGS) in 1984 (Hanley and Barker, 1993) and PFBC in 1998-1999, respectively, in order to determine AMD recovery levels. Reports of the TU and PFBC surveys conducted at the same time in the West Branch Susquehanna Subbasin can be acquired when available by contacting the TU office at (570) 748-4901 and PFBC at (814) 359-5100.

Summary Report

A Water Quality and Biological Assessment

March – July 2009

Report by Susan Buda, Aquatic Biologist

Full report with additional details of sampling methods, results and data available on the Internet at www.srbc.net/pubinfo/techdocs/Publication_268/techreport268.htm.