

# West Branch Susquehanna Subbasin Year-2 Survey

## INTRODUCTION

The Susquehanna River Basin Commission (SRBC) completed a water quality and biological monitoring study in two small watersheds, Drury Run and Birch Island Run, from April 2010 through February 2011 as part of the West Branch Susquehanna Subbasin Survey Year-2 Study (Figure 1). Drury Run and Birch Island Run, which are located in Clinton County, Pennsylvania, are direct tributaries to the West Branch Susquehanna River. The Subbasin Survey Program is one of SRBC's longest standing monitoring programs, ongoing since the mid-1980s, and is funded by the United States Environmental Protection Agency (USEPA). This program consists of two-year assessments in each of the six major subbasins of the Susquehanna River Basin on a rotating basis. The Year-1 studies are broad-brush, one-time sampling efforts of about 100 stream sites to assess water quality, macroinvertebrate communities, and physical habitat throughout the entire subbasin. The Year-2 studies focus on a particular region or small watershed within the major subbasin,

and typically seek to address one specific issue. SRBC conducted the West Branch Susquehanna Year-1 study from June-August 2009 (Buda, 2010). The Year-2 sampling plan is tailored for the individual needs or concerns of a chosen watershed, and sampled accordingly, so a more detailed evaluation can be made. More information on SRBC's Subbasin Survey Program is available at [www.srbc.net/programs/monitoring.htm](http://www.srbc.net/programs/monitoring.htm), and technical reports are available in hard copy or online at [www.srbc.net/pubinfo/techdocs/Publications/techreports.htm](http://www.srbc.net/pubinfo/techdocs/Publications/techreports.htm).

The West Branch Susquehanna River Subbasin is the largest subbasin within the Susquehanna River Basin, draining nearly 7,000 square miles. In addition to its 1,249 miles of Exceptional Value streams and scenic forestlands, it also contains the unfortunate legacy of past unregulated mining. More than 1,200 miles of waterways in the West Branch are impaired by abandoned mine drainage (AMD).

*(continued on page 2)*

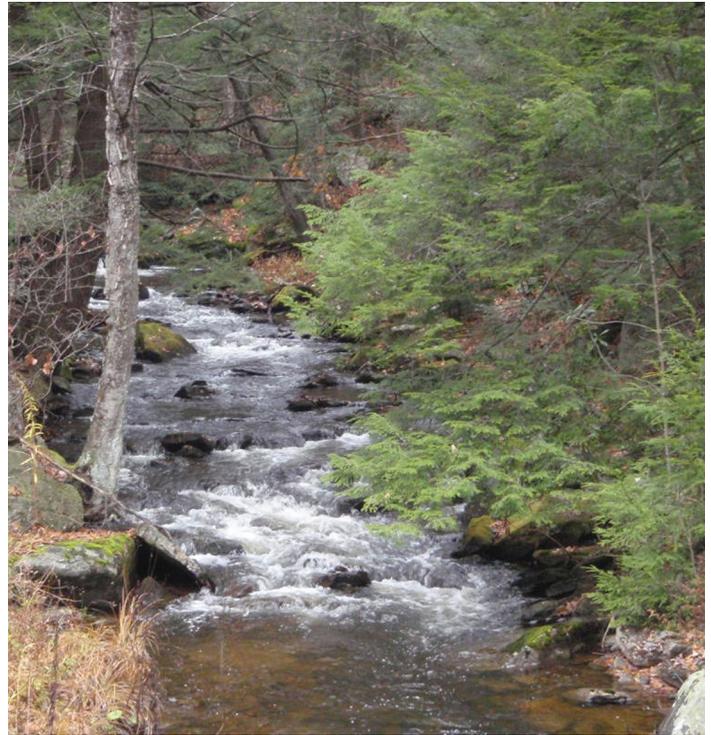
## Summary Report

### An Assessment of the Abandoned Mine Drainage Impacts in Drury Run and Birch Island Run, Clinton County, PA

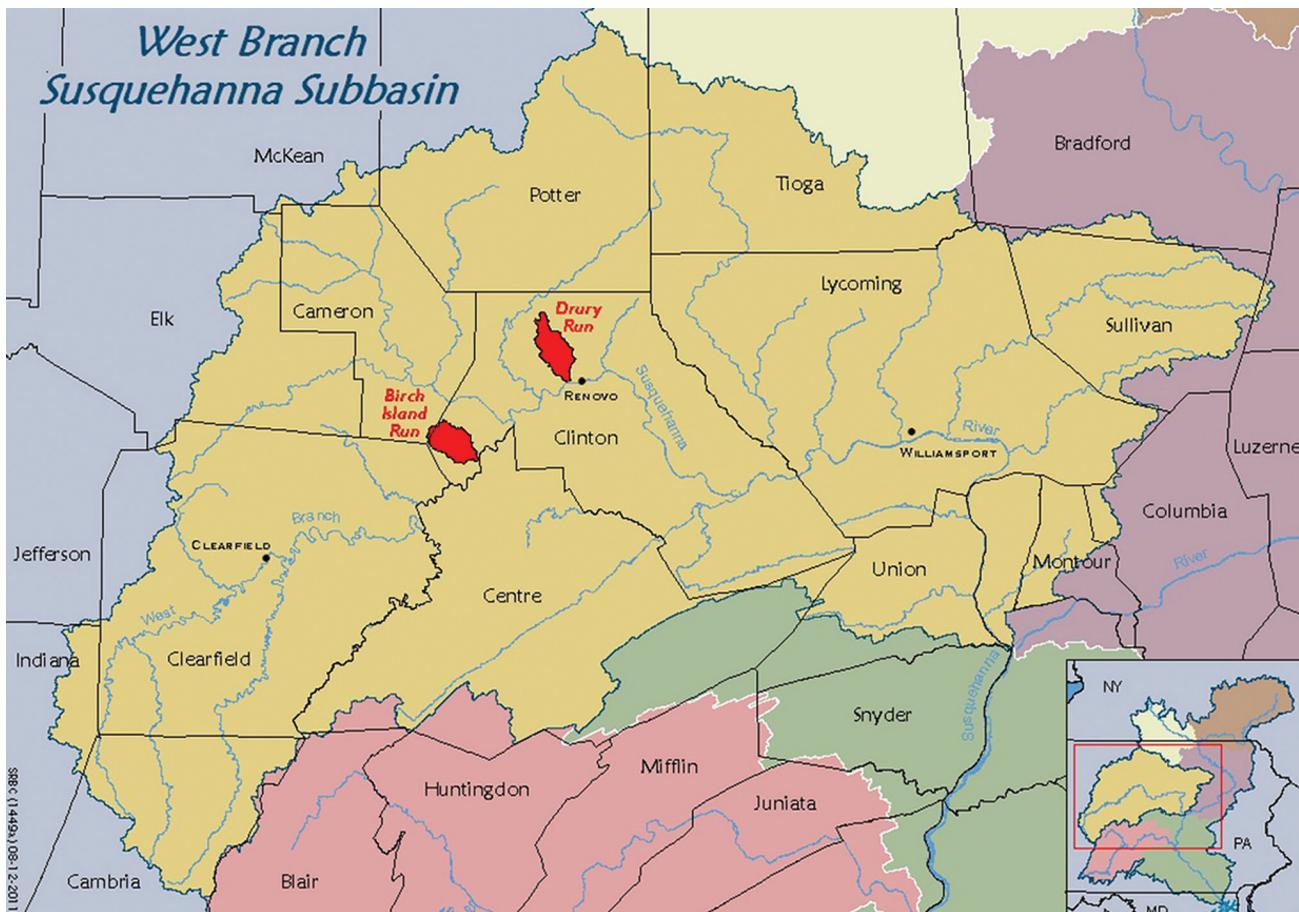
Report by Luanne Steffy, Aquatic Ecologist  
and Thomas Clark, Mine Drainage Program Coordinator

Additional data available on the Internet at [www.srbc.net/pubinfo/techdocs/Publication\\_275/techreport\\_275.htm](http://www.srbc.net/pubinfo/techdocs/Publication_275/techreport_275.htm)

Drury Run and Birch Island Run were chosen for small watershed studies primarily because they were both targeted in SRBC's West Branch Susquehanna Subbasin Remediation Strategy (2008) as watersheds that "needed more data" before any restoration efforts could begin. Both watersheds have sections of stream listed as impaired for aquatic life by AMD as well as sections that are nonimpaired. SRBC staff coordinated with Trout Unlimited (TU), Pennsylvania Department of Environmental Protection (PADEP) Moshannon District Mining Office, Western Pennsylvania Conservancy, and Clinton County Conservation District in the sampling design and set up for this project. During initial coordination with TU, which has been leading the West Branch Restoration Initiative since 2004, SRBC learned that Birch Island Run and Drury Run are two of the last AMD-impacted tributaries to the mainstem West Branch Susquehanna that will require restoration. The data collected for the project and outlined in this report will be essential in the process of determining the most effective ways to restore these two watersheds. Using the Office of Surface Mining's AMDTreat Software package, decisions can be made regarding what types of treatment, sizes, and exact specifications are needed to abate the influence of AMD on the receiving waters based on data collected during this study. More information on the West Branch Susquehanna Subbasin Remediation Strategy and more details on the coal geology and mining history of the West Branch are available at [www.srbcc.net/pubinfo/techdocs/publication\\_254/techreport254.htm](http://www.srbcc.net/pubinfo/techdocs/publication_254/techreport254.htm).



*Drury Run originates in the Tamarack Swamp, which is a perennial home to rare and endangered plant and insect species and has been designated as an Important Area for many bird species by Audubon Pennsylvania.*



**Figure 1. Location of the Birch Island Run and Drury Run Watersheds in the West Branch Susquehanna Subbasin**