# Introductory Narrative

The Montour Run Watershed is located in western Allegheny County, Pennsylvania within portions of Findlay, Moon, Robinson, and North Fayette Townships as well as Coraopolis Borough. Montour Run originates at the confluence of the North and South Forks and flows about 12.8 miles in a general northeasterly direction. Major tributaries of Montour Run include Enlow Run, McClarens Run, Milk Run, Meeks Run, Trout Run and Salamander Run. The approximately 36.6-square mile watershed has long been dominated by the Pittsburgh International Airport as well as by bituminous coal mining activities, woodlands, golf courses, small communities, and rural residential housing. In more recent years, however, development has occurred at a very rapid pace both within and adjacent to the watershed including the construction of housing plans, retail and office buildings, light industrial complexes and a major highway. Despite developmental pressures Montour Run is still largely a scenic, undeveloped, wooded, steep-sloped, flood-prone valley. An 11.5-mile long reach of the former Montour Railroad has been converted to a popular hiking trail and bikeway for recreational enjoyment of the watershed.

This report is an extension and continuation of previous and ongoing efforts of the residents of the Montour Run Watershed and other interested parties to address issues concerning the water quality and overall ecological health of the streams from the headwaters to the confluence with the Ohio River. The mouth of Montour Run is located in the Neville Island backchannel at Coraopolis, about 9.4 miles downstream of Pittsburgh, PA. Abandoned mine drainage is one of several impacts to the watershed. This report identifies and describes options to passively treat 13 abandoned mine discharges that have been ranked according to potential environmental benefit, and overall project feasibility. Implementation of these recommendations will be the next step to improve the water quality and aquatic resources of the Montour Run Watershed.

Other efforts to document the conditions of the watershed include the *Montour Run Watershed Water Quality and Aquatic Resources Report* completed in 1997 by the US Army Corps of Engineers, Pittsburgh District as well as the *Montour Run River Conservation and Land Use Plan* completed in 1999 by KCI Technologies, Inc. (Both references were used for this Introductory Narrative.) According to these reports the majority of the mine drainage pollution originates from pre-1940s deep mines and abandoned 1950's to 1960's surface mining operations. Acidity within the watershed appears to be declining possibly due to either contact with limestone or the large amounts of alkaline slag aggregate used in the construction of highways and runways within the watershed. In addition, thousands of acres of old strip mines have been reclaimed as a consequence of the construction of the Pittsburgh International Airport as well as their utilization as a landfill by Browning Ferris Industries (BFI). This reclamation has also most likely resulted in the improvement of water quality within the watershed. Even though most streams within the basin are alkaline, abandoned mine drainage still causes significant stream degradation especially in the western and central portions of the watershed. Metals associated with mine drainage, particularly aluminum, appear to be the major cause of impairment.

In the fall of 2000 and spring of 2001, the Montour Run Watershed Association (MRWA) conducted two stream walks to pinpoint the major abandoned mine discharge sites within the watershed. Water samples collected were analyzed by the PA DEP. Later, in the fall of 2001, a year-long water sampling program was initiated to gather water chemistry and flow data for the AMD discharges. The data collected during that monitoring phase has been compiled and used in conjunction with other data to develop this remediation plan. This phase of the project is funded by the Pennsylvania Department of Environmental Protection's Growing Greener Program.

Thirteen abandoned mine drainage sites are included in this report. Twelve of these sites were evaluated by BioMost, Inc. with assistance from Aquascape Wetland and Environmental Services and one site, PRE2(CLINTON ROAD) was evaluated by USFilter. Grant applications were submitted to the PA DEP under the Growing Greener Program in February 2003 for both the PRE1(SFMU2) (a.k.a. Boggs Road) and the PRE2(CLINTON ROAD) sites. These sites were given the notation of "PRE" in their title to indicate that they were evaluated prior to this report. At the time of report preparation, both of these projects were being reviewed by the PA DEP. Both the PRE1(SFMU2) and the PRE2(CLINTON ROAD) sites are included as Priority Sites and listed as "Projects Under Review".

The thirteen sites included in this report were selected by the MRWA with assistance from the PA DEP. Several alternative restoration techniques were considered to address the discharges including remining, conventional (active) treatment systems, and passive treatment systems. Based on long-term operation and maintenance requirements, overall environmental impact considering both natural and cultural resources and general project feasibility, passive treatment systems were the preferred alternative at all of the sites.

Preliminary passive treatment system designs were developed and cost estimates were prepared for the twelve sites. Using this information and other criteria included in the Prioritization Matrix, recommendations were made to the MRWA. Through the consideration of these recommendations coupled with the MRWA's extensive knowledge of the watershed, five High Priority sites were selected. Conceptual designs and more detailed cost estimates were generated for these High Priority sites.

Through the implementation of the recommended restoration plans included in this report, it is the intention of the MRWA to make a significant and lasting improvement to the water quality and aquatic resources within the Montour Run Watershed.