

Stream Restoration Incorporated

HARBISON WALKER RESTORATION AREA: PHASE II

**Laurel Run Watershed
Ohiopyle State Park, Stewart Township, Fayette County, PA**



EXECUTIVE SUMMARY

Stream Restoration Incorporated (a PA 501(c)(3)) received a grant (ME # 591054 executed 4/18/00) from the Pennsylvania Department of Environmental Protection through the Commonwealth's Growing Greener Initiative. The purpose of the grant was to provide funding for the abatement of three acidic, metal-laden, abandoned mine discharges that impacted Laurel Run, a high quality cold water fishery.

Within a period of approximately 12 months, the abandoned mine discharges (two of which were previously treated actively), were successfully abated, demonstrating once again how Public-Private Partnership efforts made up of state agencies, private industry, nonprofits, and volunteers can work together harmoniously in order to solve one of Pennsylvania's greatest lasting environmental legacies.

In order to abate the abandoned mine discharges, an innovative passive treatment system complex was installed that included sixteen components: 3 Collection Systems; 2 Limestone Only Vertical Flow Ponds (in parallel); 1 Vertical Flow Pond (limestone and compost); 1 Slag Only Vertical Flow Pond; 3 Settling Ponds; 4 naturally functioning wetlands totaling about 1 acres; 1 Horizontal Flow Limestone Only Bed; and 1 Diversion

Well. An innovative two-tiered underdrain system was installed in each Vertical Flow Ponds with valved outlets to enable a more even distribution of flow throughout the pond, as well as provide a more thorough flushing of precipitates that accumulate within the void spaces of the treatment media in order to prevent plugging and maintain effective hydraulic conductivity.

Currently, the passive treatment system is neutralizing about 430 lbs/day of acidity and preventing about 100 lbs/day of metals from entering Laurel Run. Based on recent and historical monitoring of the discharges and continued function of the Harbison Walker Phase II passive treatment system, an estimated average of 157,000 lbs/yr (78 tons/yr) of acidity and 36,500 lbs/yr (18 tons/yr) of metals are expected to be eliminated from the receiving stream.

This project is a “Sister” project to the Harbison Walker Phase I site completed through the Pennsylvania Department of Environmental Protection’s “Reclaim PA” initiative. The combined effect of these two innovative passive treatment systems have made a positive impact to the water quality of Laurel Run by significantly reducing the acid and metal loadings associated with the individual abandoned mine discharges.

In order to fully evaluate the continued effectiveness of the system and the degree of success in improving Laurel Run on a long-term basis, project partners will continue to monitor the system after the term of the grant.