

# JENNINGS WATER QUALITY IMPROVEMENT COALITION

c/o Stream Restoration, Inc. email at sri@salsgiver.com

## VERTICAL FLOW SYSTEM FACT SHEET

Jennings Environmental Education Center, PA DCNR, Bureau of State Parks  
Brady Township, Butler County, PA

### **FUNDING SOURCE:**

United States Environmental Protection Agency Fiscal Year 1996 Section 319 grant through the Pennsylvania Department of Environmental Protection Bureau of Land and Water Conservation and through the generous contributions by private industry and volunteers

### **PROJECT PARTICIPANTS:**

Hedin Environmental	Jennings Environmental Education Center
CDS Associates, Inc.	Grove City College
Girl Scouts	Homeschool Students
Jesteadt Excavating	PA Bureau of District Mining Operations(Knox)
Slippery Rock University	Shalston Trucking
Quality Aggregates Inc.	Amerikohl Mining, Inc.
Stream Restoration Inc.	U. S. Department of Energy

### **COMPLETION DATE:**

Major construction completed September 1997  
Water Quality Monitoring ongoing: PA DEP Knox DMO (9/97 thru 4/99), CDS Associates, Inc. (on-going)

### **MATERIALS USED FOR TREATMENT:**

300 Tons of Spent Mushroom Compost mixed with 380 Tons of AASHTO# 9 Special Limestone aggregate (2½ -foot layer).

### **WATER COLLECTION AND DISTRIBUTION:**

Overdrain: 2" PVC header pipe with 3/4" perforated laterals (20' in length) every 6 feet fed by three 2" inlet pipes from flow splitter box. Flow splitter box is plumbed into previously constructed anoxic collection system.

Underdrain: Three sections of 2" PVC fed by 3/4" perforated laterals (15' in length) every 6 feet bedded in river gravel.

Outlet: 4" flexible plastic pipe with clear insert for observation, adjustable to control water level in system.

### **SYSTEM DIMENSIONS (FEET):**

	<u>Length</u>	<u>Width</u>	<u>Depth</u>
<u>Vertical Flow System</u>	150	50	6
<u>Channel Wetland</u>	175	8	<1/2
<u>Wetland</u>	100	20	1/2
<u>Settling Pond</u>	100	20	3

**WATER QUALITY (representative):**

Sample Point	Flow (gpm)	pH	Alkalinity (mg/l)	Acidity (mg/l)	Fe (mg/l)	Mn (mg/l)	Al (mg/l)
RAW	30	2.9	0	260	50	8	20
Final Effluent	30	7.0	200	0	1	6	<1