

**Slippery Rock Watershed Coalition**  
**SR 101A ANOXIC LIMESTONE DRAIN SYSTEM FACT SHEET**

PA Game Lands No. 95, Washington Township, Butler County, PA  
“A Public-Private Partnership Effort”

**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.

**PROJECT PARTICIPANTS:**

Hedin Environmental	Quality Aggregates Inc.
Jesteadt Excavating	PA Bureau of Abandoned Mine Reclamation
PA Game Commission	CDS Associates, Inc.
BioMost, Inc.	PA Bureau of District Mining Operations(Knox)
Slippery Rock University	Shaliston Trucking
Amerikohl Mining, Inc.	Stream Restoration Inc.
Slippery Rock Watershed Coalition Volunteers	

**COMPLETION DATE:**

Construction completed August 1998  
Water quality monitoring ongoing: PA DEP, Knox DMO and Slippery Rock University

**MATERIALS USED FOR TREATMENT:**

900 Tons limestone aggregate (#3)

**WATER COLLECTION AND DISTRIBUTION:**

Collection: In 6'W x 30'L trench, a 4" perforated SDR 35 PVC pipe was bedded in 1.5' of #3 and #2 river gravel. Filter fabric was used to prevent siltation. Native clay was used as a cap to preclude oxygen from the anoxic collection system.

Inlet: From the collection system, the captured flow is distributed by a perforated SDR 35 PVC manifold (30'L) extending along the east end (width) of the drain.

Outlet: The water is collected in the southwest corner in “hand-drilled” perforated SCH 40 PVC pipe (L-shaped; two, 10-foot sections) and outlets through a 4" solid PVC pipe with an air trap into the first settling pond.

**SYSTEM DIMENSIONS (FEET):**

	<u>Length</u>	<u>Width</u>	<u>Depth</u>
<u>Anoxic Limestone Drain</u>	126	50	3
<u>Settling Pond</u>	103	24	1½
<u>Wetland Cell #1</u>	200	30	1
<u>Wetland Cell #2</u>	200	20	½

**SOIL AMENDMENTS AND SEED MIXTURE:**

Birdsfoot trefoil @ 10 lbs/ac; White Dutch clover @ 4 lbs/ac; KY Bluegrass @ 10 lbs/ac; perennial rye @ 6 lbs/ac; 10-20-20 fertilizer @ 300 lbs/ac; Aglime @ 4 tons/ac

**WATER QUALITY (representative):**

	<u>Flow(gpm)</u>	<u>pH</u>	<u>alk(mg/l)</u>	<u>acd(mg/l)</u>	<u>Fe(mg/l)</u>
Pre-construction: Raw	14	5	30	150	80 (ferrous)
Post-construction: Final	40	6.7	100	0	7 (particulate)