

Slippery Rock Watershed Coalition
SR 114 B and D ANOXIC LIMESTONE DRAIN SYSTEM FACT SHEET

PA State Game Lands #95, Washington Township, Butler County, PA

FUNDING SOURCE:

Bond Forfeitures *Black Fox*

PROJECT PARTICIPANTS:

Hedin Environmental

CDS Associates, Inc.

PA Bureau of District Mining Operations(Knox)

Jesteadt Excavating

PA Game Commission

COMPLETION DATE:

Major construction completed September 1995

Water Quality Monitoring ongoing: PA DEP, Knox DMO and Slippery Rock University

MATERIALS USED FOR TREATMENT:

ALD B- 350 Tons, AASHTO #1, 90% CaCO₃, Limestone Aggregate

ALD D- 1100 Tons, AASHTO #1, 90% CaCO₃, Limestone Aggregate

WATER COLLECTION AND DISTRIBUTION:

Collection: ALD B- In a 120' anoxic collection system, 6" perforated CPP bedded in gravel.

ALD D- 125-gpm flow captured in innovative collection system including the vertical placement of a 12' long, 3 foot diameter, epoxy-coated, steel casing.

Inlet: ALD B- From the collection system, the captured flow is distributed by 4"perforate CPP manifold (23'L) extending along the east end (width) of the drain.

ALD D- From the collection system, the captured flow is plumbed onto a 6" PVC pipe and distributed by a 6" perforated CPP manifold (33'L) extending along the east end (width) of the drain.

Outlet: ALD B- 4" perforated CPP manifold (23'L) extending along the west end (width) of the drain and plumbed to a 6" PVC pipe, which opens up to a rock lined channel leading to Pond B.

ALD D- 4" perforated CPP manifold (29"L) extending along the south end of the drain and plumbed onto a 6" PVC pipe, which extended 86 feet to Pond D1.

SYSTEM DIMENSIONS (FEET):

	<u>Length</u>	<u>Width</u>	<u>Depth</u>	<u>Size</u>
<u>Anoxic Limestone Drain B</u>	60	30	5	350 T
<u>Anoxic Limestone Drain D</u>	60	30	2.9	1150 T
<u>Settling Pond #B</u>	71	85	4	6000 SF
<u>Settling Pond #D1</u>	137	36	2	5000 SF
<u>Wetland #D2</u>	134	52	3 ½	7000 SF

<u>Wetland #D3</u>	119	46	1	5500 SF
<u>Wetland #D4</u>	108	46	1/5	5000 SF

WATER QUALITY (representative):

	Flow (gpm)	pH	Alkalinity (mg/l)	Acidity (mg/l)	Fe (mg/l)	Mn (mg/l)	Al (mg/l)
Pre- construction B&D (raw)	180	5.5	30	50	40	1	<1
Post- construction B&D (final)	180	6.5	100	0	6 (diss. <2)	1	<1