GIS Data Collection Form

Pennsylvania AML/AMD Remediation Projects

	PA-135	PA-148	PA-136	PA-140	PA-103	PA-137	PA-141	PA-149	PA-179
Name of Project:	Orchard OxicLimestoneDrain	Buck Mtn AnoxicLimestoneDrain	Hegins OxicLimestoneDrain	Rowe Tunnel/Lorberry Cr. DIversionWell+Wetlands	U. Swatara LimestoneDiversionWells	Martin Run LimestoneDiversionWell	L. Rausch Cr. Wetlands	Bell Colliery VerticalFlowSystems	Otto AerobicWetlands	Reevesdale OxicLimestoneDrain
Latitude:	40.6072	40.6675	40.6608	40.5942	40.6728	40.6586	40.5894	40.7533	40.6674	40.7842
Longitude:	-76.4247	-76.3067	-76.3497	-76.4406	-76.3608	-76.3464	-76.4117	-76.0494	-76.3198	-76.0081
GPS? Y N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Watershed Name:	Swatara Cr. L. Rausch Cr.	Swatara Cr. U. Swatara Cr.	Swatara Cr. U. Swatara Cr.	Swatara Cr. Lorberry Cr.	Swatara Cr. U. Swatara Cr.	Swatara Cr. Good Spring Cr.	Swatara Cr. L. Rausch Cr.	Schuylkill River U. Schuylkill River	Schuylkill River Muddy Branch	Schuylkill River Muddy Branch
USGS Quadrangle:	Pine Grove	Minersville	Minersville	Pine Grove	Minersville	Tremont	Pine Grove	Delano	Minersville	Delano
County:	Schuylkill	Schuylkill	Schuylkill	Schuylkill	Schuylkill	Schuylkill	Schuylkill	Schuylkill	Schuylkill	Schuylkill

Contact Person/Organization:

Name:	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta
Telephone:	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963
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Address:	U.S. Geological Survey 215 Limekiln Rd. New Cumberland PA 17070	U.S. Geological Survey 215 Limekiln Rd. New Cumberland PA 17070	U.S. Geological Survey 215 Limekiln Rd. New Cumberland PA 17070	U.S. Geological Survey 215 Limekiln Rd. New Cumberland PA 17070	U.S. Geological Survey 215 Limekiln Rd. New Cumberland PA 17070	U.S. Geological Survey 215 Limekiln Rd. New Cumberland PA 17070	U.S. Geological Survey 215 Limekiln Rd. New Cumberland PA 17070	U.S. Geological Survey 215 Limekiln Rd. New Cumberland PA 17070	U.S. Geological Survey 215 Limekiln Rd. New Cumberland PA 17070	U.S. Geological Survey 215 Limekiln Rd. New Cumberland PA 17070

Organization responsible for operation/maintenance of project if different than above:

Name:	Wayne Lehman	Wayne Lehman	Wayne Lehman	Wayne Lehman	Wayne Lehman	Wayne Lehman	Wayne Lehman	Wayne Lehman	Wayne Lehman	Wayne Lehman
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Address:	Schuylkill Conservation D 1206 Ag Center Dr. Pottsville PA 17901	Schuylkill Conservation D 1206 Ag Center Dr. Pottsville PA 17901	Schuylkill Conservation D 1206 Ag Center Dr. Pottsville PA 17901	Schuylkill Conservation D 1206 Ag Center Dr. Pottsville PA 17901	Schuylkill Conservation D 1206 Ag Center Dr. Pottsville PA 17901	Schuylkill Conservation D 1206 Ag Center Dr. Pottsville PA 17901	Schuylkill Conservation D 1206 Ag Center Dr. Pottsville PA 17901	Schuylkill Conservation D 1206 Ag Center Dr. Pottsville PA 17901	Schuylkill Conservation D 1206 Ag Center Dr. Pottsville PA 17901	Schuylkill Conservation District 1206 Ag Center Dr. Pottsville PA 17901

Source of AMD: Underground / Sur	Underground Orchard	Underground BuckMtn	Underground Hegins	Underground Rowe	Underground BuckMtn+Hegins	Underground Colket+Eureka	Underground New Lincoln+Orchard	Underground ell Colliery Drainage Tunnell	Underground Colliery Drainage Tunnell	Underground Colliery Drainage Tunnel
Year Constructed:	1995	1997	2000	1998,2001	1995	1997	1998	2004	2005	2006
Capital Cost:	$10,000	$30,000	$66,000	$80,000	$15,000	$5,000	$80,000	$230,000	$160,000	$230,000
Primary Funding Partners: Check all that apply	USGS	SCD/BMR	BMR	BMR,USDOE	BMR	BMR	BAMR	SCD/319	SHA/319	SHA/319
DEP Growing Greener:										
DEP Title IV, Appalachian Clean Streams:										
DEP 10% AMD Set Aside Funds:							X			
DEP Section 319:								X	X	X
OSM Watershed Cooperative Assistance Program:										
NRCS:										
EPA:										
USCOE:										
Others:										
BMR Pottsville	X	X	X	X	X	X	X			
USGS	X	X	X	X	X	X	X	X	X	X
USDOE				X						

Treatment Technology: Select all that apply

Anoxic Limestone Drain:		X								
Vertical Flow Pond:								X		

Aerobic Wetland:				X			X	X		
Anerobic Wetland:									X	X
Settling Ponds:									X	X
Diversion Well:				X	X	X				
Sulfate Reducing Bio-Reactor:										
Oxic Limestone Channel:			?							
Active Chemical Treatment:				X						
Capping:										
Alkalinity Injection:										
Manganese Removal Bed:										
Limestone Flushing Bed:										
Others:										
Oxic Limestone Drain:	X		X						X	X
Inflow USGS Station:	403626076253001	404032076222901	403955076211801	403542076263201	157155010	157156010	1571758	404512076025501	146784348	404705076003201
Quantity (Flow): GPM	20.20	56.10	98.74	2194.63	1346.40	381.48	2652.41	825.79	1258.88	391.80
pH:	3.60	5.00	3.50	5.60	5.50	6.00	7.00	3.90	6.20	4.70
Alkalinity mg/L:	0.00	3.60	0.00	3.10	3.00	4.00	15.00	0.00	45.85	1.40
NetAcidity mg/L:	26.76	22.00	22.00	14.83	-1.04	2.98	-9.12	16.41	-17.59	6.57
Iron mg/L:	2.00	11.90	0.16	5.75	0.20	2.45	0.87	2.15	11.50	1.90
Aluminum mg/L:	0.88	0.40	4.00	0.20	0.25	-0.20	-0.10	1.25	0.15	1.00
Manganese mg/L:	2.80	1.00	1.30	2.01	0.37	0.70	1.18	1.60	2.05	0.89
Date of Collection:	Medians	Medians	Medians	Medians	Medians	Medians	Medians	Medians	Medians	Medians
DEP ID Number:										
Outflow USGS Station:	403626076253016	157154970	403955076211802	157177620	157155014	157156014	1571760	146742498	146784350	404705076003202
Quantity (Flow): GPM	5.39	56.10	85.27	2513.28	2805.00	446.56	2293.37	1095.07	1258.88	237.86
pH:	6.58	6.40	4.60	6.20	6.20	6.05	6.90	5.20	6.70	6.60
Alkalinity mg/L:	82.50	69.00	0.00	5.00	6.00	6.00	16.00	2.80	39.50	96.00
NetAcidity mg/L:	-75.79	-50.51	6.82	8.62	-4.57	1.11	-11.40	4.68	-18.86	-93.94
Iron mg/L:	0.01	8.60	0.09	4.50	0.14	2.30	0.41	1.00	7.50	0.08
Aluminum mg/L:	0.04	-0.14	3.40	-0.10	-0.14	-0.20	-0.10	0.70	-0.10	-0.10
Manganese mg/L:	1.80	0.84	1.21	1.50	0.32	0.81	1.05	1.40	1.95	0.52
Date of Collection:	Medians	Medians	Medians	Medians	Medians	Medians	Medians	Medians	Medians	Medians
DEP ID Number:										

If more detailed water quantity and quality data is available, please provide the following:

Contact:	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta	Chuck Cravotta
Telephone:	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963	717-730-6963
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Comments: (specific to O&M; performance; impact on receiving stream. Include date of inspection and name and telephone number of person making comment)

Buried; not flushable. High purity limestone.	Buried; flusable. High purity limestone.	Not buried; flushable; like manganese removal bed. High purity limestone.	Two diversion wells plus wetland; data upstrm downstrm Wetland inflow treated with Aquafix.	Two diversion wells; data upstrm downstrm Frequent clogging.	One diversion well; data upstrm downstrm. Frequent clogging.	Impoundment directly on stream.	Side by side ponds; One only limestone Other compost+limestone Limestone was dolomitic.	Pond followed by two shallow wetlands, and limestone drain. Drain clogged w/in months	OLD followed by two shallow wetlands. Flush pipes configured for backflushing.

Any links specific to this watershed that should be included?

Web Address: