

Publicly Funded Mine Drainage Treatment or Abatement Project Information Sheet

General Project Information

Project Name and or No.: Monastery Run - Wetland No. 1 PA-083
Location: Municipality and County: Unity Township Westmoreland County
Watershed: Four Mile Run / Monastery Run / Loyalhanna Creek
USGS Quadrangle: Latrobe
Latitude and Longitude: 40.298333 -79.41305599999997

Contact Information

Contact Organization: PADEP BAMR
Contact Person: Eric Cavazza
Contact Address: 286 Industrial Park Road
Ebensburg
PA
15931-4119
Contact Telephone Number: 814-472-1800
Contact Email: ecavazza@state.pa.us

Organization Currently Responsible For Project Operations, Monitoring and Maintenance

Is this organization different from Contact Organization? Yes
Organization Name: St. Vincent College, Environmental Education Center
Organization Contact Name: Beth Bollinger
Organization Contact Address: Winnie Palmer Nature Reserve @ St. Vincent Coll.
300 Fraser Purchase Road
Latrobe, PA 15650-2690
http://www.wpnr.org/
Organization Telephone Number: 724-537-5284
Organization Email: beth.bollinger@email.stvincent.edu

Site Information

Who owns the property the project is constructed upon?
Wimmer Corporation (St. Vincent College)

Driving Directions to the Project Site (from an easily identifiable reference point):
From the intersection of routes 981 and 30, turn north onto Rt. 981. At the first red light, turn left onto Beatty County Road. Follow Beatty Road past St. Vincent College to Auction Barn Road. You will pass St Vincents Drive and Broewers Drive on your left and the Monastery Run Wetland Treatment Systems 2 and 3 before getting to Auction Barn Road. Turn right onto Auction Barn Road and travel a short distance to a bridge that crosses over Four Mile Run. Immediately after crossing the bridge, the access road and gate will be on your right. The access road serves as access for the treatment system as well as the Unity Township Municipal Aurtherity sewage treatment plant. Follow the access road back until you reach the treatment system on your right. A turn around is located at the very end of the access road near the outlet of the treatment system. If thbe gate is locked, you can contact Beth Bollinger at the St. Vincent Environmental Education Center (724) 537-5284.

Special instructions for entry to the site (gates; keys, notifications or permissions, etc.):
A gate is present near the access off of Beatty Road. The Unity Township Municipal Authority operates a wastewater treatment plant immediately adjacent to Wetland 1. The Wastewater treatment plant and the passive treatment system share the same access road.

Is there a perpetual access agreement for monitoring and O&M? Yes No
Is the site readily accessible (by 2WD vehicle)? Yes No
Was project completed as part of an overall watershed restoration plan? Yes No
Is the plan available electronically? Yes No

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Could you provide the DEP a copy of the plan? Yes No

Is a copy of the plan attached? Yes No

Project Description (Describe the treatment system including each individual component):

The treatment system includes a four-celled aerobic wetland. Cell No.1 is 0.8 acres and contains a limestone base as the primary discharge enters this cell under artesion pressure through pipes placed in a subsidence hole. Cell No. 2 is 2.4 acres of cattail wetland, Cell No. 3 is 3.1 acres of open water wetland and Cell No. 4 is 1.8 acres of open water wetland. Two inverted siphons then carry the effluent from this treatment system under Four Mile Run to the Wetland No. 2 treatment system.

Pre-Construction Discharge Flow and Monitoring Data

Is data available electronically? Yes No

In what format? Microsoft Excel Access Database Other (specify) Adobe Acrobat

Indicate how flow was measured: Weirs

Indicate laboratory that analyzed samples (or whether field kits were used)

DEP Laboratory in Harrisburg

Could you provide this data to the DEP? Yes No

Is a copy of the data attached? Yes No

Pre-Construction Receiving Stream Flow and Monitoring Data

Is data available electronically? Yes No

In what format? Microsoft Excel Access Database Other (specify) _____

Indicate how flow was measured: _____

Indicate laboratory that analyzed samples

Were any biological or fish surveys completed? Yes No

Could you provide this data to the DEP? Yes No

Is a copy of the data attached? Yes No

Treatment System Design Information and Criteria

Who or what firm completed project design? (Include name, address, phone, email and contact person, if available): PADEP BAMR

Eric Cavazza
286 Indstrial Park Road, Ebensburg, PA 15931-4119
814-472-1800, ecavazza@state.pa.us

Are digital photographs of the site before, during and/or after construction available? Yes No

Was there a Specific Restoration or Treatment Goal for this treatment system? Yes No

If yes, please describe the goal: To reduce the total iron concentration from approximately 90 mg/L in the influent to less than 5 mg/L at the effluent

What is the Design Flow Rate? 660 gallons per minute

Other design criteria (retention time, acidity loading or removal rate, metals loading or removal rate, alkalinity generation rate, etc.) The theoretical retention times were 25.2 hours at peak flow, 63.9 hours at average flow, and 463.1 hours at minimum flow conditions. The surface loading load for Total Iron was 18.9 gm/sq.meter/day at peak loading, 7.8 gm/sq. meter/day at average loading, and 1.2 gm/sq. meter/day at minimum loading conditions.

Does the treatment system take all of the flow or is some of the flow bypassed?

All of the flow enters the treatment system under artesion pressure at several points throughout the treatment system. During very high flow events (>3,000-4,000gpm), the two inverted siphons are unable to convey all of the treatment system effluent under Four Mile Run and into the Wetland No. 2 treatment system.

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Plans and Specifications:

As-Bid Project Drawings and Technical Specifications

Is this information available electronically? Yes No

Could you provide the DEP a copy of the plan? Yes No

Is a copy attached? Yes No

As-Built Drawings

Is this information available electronically? Yes No

Could you provide the DEP a copy of the plan? Yes No

Is a copy attached? Yes No

Construction and Project Funding Information

What year was the project constructed? 1998

When (specific date) did project construction begin? April 21, 1997

When (specific date) was project construction completed? October 23, 1998

Who was the Construction Contractor? (Name, Address, Phone, email, contact person)

Casselman Enterprises, 140 west Union Avenue, Somerset, PA 15501

Jim Svonovec

When (specific date) did the treatment system go on-line? October 1997

Primary Funding Partners, and funding provided:

Source	True or false	Amount
Title IV, Appalachian Clean Streams	_____	_____
PADEP Growing Greener	_____	_____
10% AMD Set Aside Funds	True	461,066
EPA Section 319	_____	_____
OSM Watershed Cooperative Assistance Program	_____	_____
NRCS	_____	_____
EPA Watershed Protection	_____	_____
USCOE	_____	_____
University	_____	_____
Private/Foundation	_____	_____

How or by whom was treatment system construction funded or other funding not included in the table?

Source	Amount
_____	_____
_____	_____
_____	_____

Post Construction Operation, Monitoring and Maintenance

Is there a Sampling and Monitoring Plan? Yes No

Is the plan available electronically? Yes No

Is a copy of the plan attached? Yes No

Is treatment system currently being sampled and monitored? Yes No

If so, by whom? St Vincent College - contact: Beth Bollinger

Approximately how many hours per year are spent doing O,M&M for this system? 75

Where are samples being analyzed? (Name, Address, Phone, email, contact person)

DEP Laboratory in Harrisburg

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If DEP Lab is being used, what is the project ID and the Sample Information System (SIS) monitoring point IDs?

Project ID: Monastery Run; Monitoring Point IDs: Cell1, Cell2, Cell3, Cell4, Final, FMRUS, & FMRDS

Is there an Operation and Maintenance Plan? Yes No

Is the plan available electronically? Yes No

Could you provide the DEP a copy of this information? Yes No

Is a copy of the information attached? Yes No

Comments on the treatment system: Contact PJ Shah for a copy of the O&M Plan

Post- Construction Discharge Flow and Monitoring Data

Is the data available electronically? Yes No

In what format? Microsoft Excel Access Database Other(specify) Online at weblinks listed below

Indicate how flow was measured: 4-foot rectangular weir

Could you provide the DEP a copy of this information? Yes No

Is a copy of the information attached? Yes No

Post-Construction Receiving Stream Flow and Monitoring Data

Is the data available electronically? Yes No

In what format? Microsoft Excel Access Database Other(specify) Online at weblinks listed below

Indicate how flow was measured: _____

Could you provide the DEP a copy of this information? Yes No

Is a copy of the information attached? Yes No

Were any biological or fish surveys that were completed on the receiving stream? Yes No

Treatment System Maintenance and/or Rehabilitation

Has rehabilitation work been performed at the site? Yes No

True(yes) or false(no): Yes

If yes, please list the rehabilitation activity. Two inverted siphons were installed to convey the effluent from the treatment system under Four Mile Run to an adjacent treatment system constructed by the NRCS (Monastery Run Wetland No. 2) to further treat the water prior to discharge back to the stream. A small internal dike was constructed to control an artesian discharge which erupted into the treatment system shortly after final construction. Also, numerous small projects to unclog pipes and restore water flow through the system have been completed over the years.

If yes, please list the date of rehabilitation. 8/2/1999, 03/09/2000, 04/06/2004, 07/07/2004, 04/01/2005, 02/14/2006, and fall of 2008

If yes, please list the rehabilitation cost. \$15,500

What routine or non-routine maintenance issues have arisen since system was put online?

Clogging of the inlets and outlets of the two inverted siphons with vegetation and iron deposits.

How was maintenance work funded?

BAMR BD Crew

What routine or non-routine maintenance is currently needed or anticipated in the next 1-3 years?

The lower end of the treatment system is rapidly filling with iron precipitates and will need cleaned out. The DEP and St. Vincent College are reviewing a proposal by Hedin Environmental to clean out and

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market the iron hydroxide sludge in all three of the passive treatment systems located at St. Vincent
Colege.

Other Comments

Treatment System Weblinks: <http://facweb.stvincent.edu/eec/> and
<http://facweb.stvincent.edu/Academics/EnvScience/WSRestoration.htm>

Person(s) Completing this Form (Name, Address, Phone, email, Date Completed):

Eric Cavazza (814) 472-1800

PA-DEP-BAMR-Cambria Office

286 Industrial Park Road

Ebensburg, PA 15931-4119

**Is there any other person, company or organization that should be contacted for
information about this treatment system or the information requested in this form?**

(Include Name, Address, Phone, email, etc):
