

Old Never Sweat AMD Remediation System
SRI O&M TAG Project #40 Request #1
OSM PTS ID: PA-234

Requesting Organization: Huntingdon County Conservation District (HCCD)

Requesting Organization Representative: Andy Patterson & Celina Seftas

Municipality/County: Carbon Township, Huntingdon County

Dates of Work Performed: 3/11/19-3/13/19

BioMost Personnel: Ryan Mahony and Henry Thornton

Initial Request: In August 2015, Andy Patterson of the HCCD contacted Stream Restoration Incorporated (SRI) concerning the Old Never Sweat Limestone Bed. Andy indicated the system was not functioning as desired and there may be a problem related to the siphon.

Initial Site Visit, Observations, Evaluation and Identified Needs:

- An initial site investigation was conducted on 9/22/15 under O&M TAG 2.
- During the site visit, the system did not flush, but there was evidence of recent flushing. Vegetation, sludge and sediment were observed in portions of the bed especially further away from outlet pipe.
- Limited water quality data was evaluated which indicated variability in treatment performance.
- Recommendations were made to stir/wash limestone, extend the underdrain pipe to provide more effective flushing, and evaluate siphon functionality during maintenance.

Work Completed:

- Washed and stirred limestone bed. Approximately 2 feet of water was maintained within the bed to wash the limestone more effectively.
- Sediment-laden water flushed/ pumped to the settling pond prior to installation of new underdrain.
- 120 feet of 6" DR-11 HDPE pipe perforated with 1.25" holes spaced 6" apart was plumbed onto the original SDR 35 underdrain pipe connected to the siphon vault to extend the pipe the entire length of the bed to provide for more effective flushing.
- Two 3" pumps were used to manage water and assist with filling of the limestone bed to test functionality of the siphon, as well as expediting the draining of the pond after successfully triggering the siphon mechanism.
- A 6"x8" rubber Fernco coupling was installed on the top of the siphon trigger pipe to raise the effective elevation of the overflow, allowing the siphon to trigger properly.
- Vegetation was removed from the outlet of settling pond 2 which may have been preventing the limestone bed from draining fully by controlling the effective water level of all 3 system components.
- Vegetation was removed to the original design elevation dictated by stone placed in the spillway.

Results: Water monitoring conducted in May 2019 indicated that the system was once again performing well with pH 6.5, acidity -7 mg/L, and Fe, Al, and Mn < 1mg/L.

Recommendations & Future Considerations:

- Continue to monitor flow and water quality parameters.
- Increasing limestone quantity for alkalinity generation and increasing the size of the settling pond to help settle particulates may be necessary to improve treatment performance.



Top Left: 600-ton limestone bed with dosing siphon. Vegetation growing in large portions of the bed.

Top Right: Settling pond with cloudy water due to aluminum precipitates.

Bottom: Limestone media within the northern portion of the system showing signs of void spaces filling with metal precipitates, vegetation, and sediment.



Top Left: Cleaning sediment from the dosing siphon with a pump and fire hose.

Top Right: Stirring and washing the limestone bed.

Bottom Left: New underdrain installed in the limestone bed.

Bottom Right: Cleaning sediment from the siphon vault.

