Stormwater runoff treatment – Mille Lacs County Public Works South Facility
Location: City o Milaca



Aerial view/topo, infiltration/treatment basin in blue outline, wetland in green

Project Summary

This project was allocated funding from the Rum River Watershed Partnership based on the following assessment:

This is a stormwater mgmt. project to protect downstream surface waters. ML County Public Works So Facility site is w/in the City of Milaca. Currently its a dirt lot on a steep slope with no treatment before the wetland. Sand and salt stormwater runoff runs downhill entirely into a wetland draining to a public ditch that then joins Vondell brook. Vondell brook has impairments but is also altered as a public ditch system. This project will stop all sediment from reaching the wetland. It is informally assessed with input from the Co PW Director, City Administrator and SWCD as second of two point sources of sediment runoff w/in Milaca. This does not run directly to the Rum. Other point sources do run directly to the Rum.
AI assisted reduction assumption pre-engineering site visit: Under existing conditions, approximately 850 lb./yr (0.42 tons/yr) of total suspended solids

Project Status:
Initiated: 5/1/2026
Contract approved: tbd
Completed: tbd

Funding:
Total cost: $tbd
Implementation assistance: $50,000 FY25 WBIF Rum River Watershed Partnership
Landowner match: $12,500

Resource Concern:
Untreated Stormwater runoff to wetland/ditch/Vondell Brook/Rum River

Cooperators:
Mille Lacs County

Funder: Rum River Watershed Partnership, Watershed Based Implementation Funding

Engineering: TSA 3

Contractor:
Allied Blacktop

Location:
Rum River Watershed

and 0.85 lb./yr of total phosphorus are delivered to the adjacent wetland. The majority of the phosphorus originates from the gravel surface, hillside erosion, and sand/salt handling operations.
By paving the yard (not to be cost shared) and routing runoff through a stormwater treatment system designed to remove approximately 80% (maybe we can increase this after engineer input) of suspended solids and both particulate and dissolved phosphorus, the annual loads to the wetland are estimated to decrease to roughly 75 lb./yr (0.04 tons/yr) of TSS and 0.35 lb./yr of TP. This represents an approximate 90% reduction in sediment and 60% reduction in phosphorus delivered to the wetland, while also greatly reducing direct soil erosion and uncontrolled transport of sand and salt.

Anoka Conservation District - Voting in favor because (a) project benefits the Rum River via Vondell Br even though Vondell is not a priority water, (b) I think the pollutant reduction estimates in this application are low and the project will actually achieve more. I ran a quick WinSLAMM model for a 6.93 ac medium industrial area. Without any treatment, it estimates 3,450 lbs. (1.7 ton) TSS and 5.8 lb. TP per year lost from the site. Assuming an 80% reduction as the application proposes, that's a 1.36 ton sediment and 4.64 lb. TP reduction. This translates into a much more reasonable $1,358 per lb. TP reduction. Albeit, some of this will not be realized at the Rum River.

Installation is tied to a pre-existing contract that Mille Lacs County has with Allied Blacktop to manage erosion caused by runoff. This project will expand the project to address pollutant treatment of the runoff. But do to timeline constraints of the existing project contact the installation needs to begin September 2026. The TSA3 engineer’s preliminary estimate is approximately $50,000.

Susan Shaw

From: Noelan Lange <Noelan.Lange@millelacs.mn.gov>
Sent: Tuesday, September 29, 2026 12:51 PM
To: Susan Shaw
Subject: [Internal Mail] South Maintenance Facility Rain Water Garden

Dear SWCD Board Members,

Thank you for your support and for the opportunity to consider the proposed BWSR rain garden design. After reviewing its larger footprint, location where the heavy equipment and semi-trailers park, and the doubling of long-term maintenance needs, Mille Lacs County has determined that it cannot move forward with the design. Although the County's share of the initial construction cost decreased, the loss of usable space and added upkeep would create costs the County cannot accommodate.

The County has signed agreements with Allied to complete the original rain garden designed by Allied's civil engineer, Blair Jenson. We appreciate the Board's work on this proposal and hope to collaborate on future projects to improve water quality.

Kind regards,

Noelan R. Lange
Facility & Fleet Operations Manager

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