Lily Lake Stormwater Retrofit, Commercial Properties

Clean Water Funds: 2012

Clean Water Grant	$194,893
Leveraged Funds*	$59,840
Total Project Budget	$254,733

*** Leveraged Funds include required 25% local match**

Targeted Water:
Lily Lake

Project Sponsor:
Middle St. Croix Watershed Management Organization

Grant Period:
January 2012—December 2014

Project Contact:
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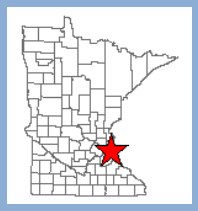


C12-230 - Clean Water Assistance

Project Narrative

Lily Lake, near Stillwater, is a popular recreational spot for residents with its swimming beach, fishing pier, and canoe access. Lily Lake's water quality is declining because of excess nutrients. Restoring it is a priority for the community of Stillwater and the Middle St. Croix Watershed Management Organization.

This project is a continuation of projects identified in a prioritized subwatershed analysis that targets practices to reduce nutrient loads to Lily Lake. The first phase of the project was completed in 2012. This effort complements the second phase of the project funded in 2012 and the third phase funded in 2013.

Specifically, this project implemented two large stormwater biofiltration cells and a reuses water from the existing stormwater pond to irrigate the landscape. In total, the system captures, treats and reuses runoff from 12.17 acres of parking lot and rooftop runoff from DiaSorin Manufacturing and the Valley Ridge Mall.

This project was made possible with financial contributions from Valley Ridge Mall, DiaSorin Manufacturing and the Middle St. Croix Watershed Management Organization. Technical design and installation quality control was provided by the Washington Conservation District.

Proposed Outcomes:

Installation of 9,000 cubic feet of live storage volume to capture stormwater runoff from roofs and parking areas draining to Lily Lake. - Lily Lake

Reuse and recycle stormwater in irrigation on properties - Lily Lake

Adjustment of outlet and provide buffer of pond to capture stormwater runoff draining to Lily lake - Lily Lake

Proposed Reductions: 13 lbs/year Phosphorus and 2 tons/year Sediment

Actual Outcomes:

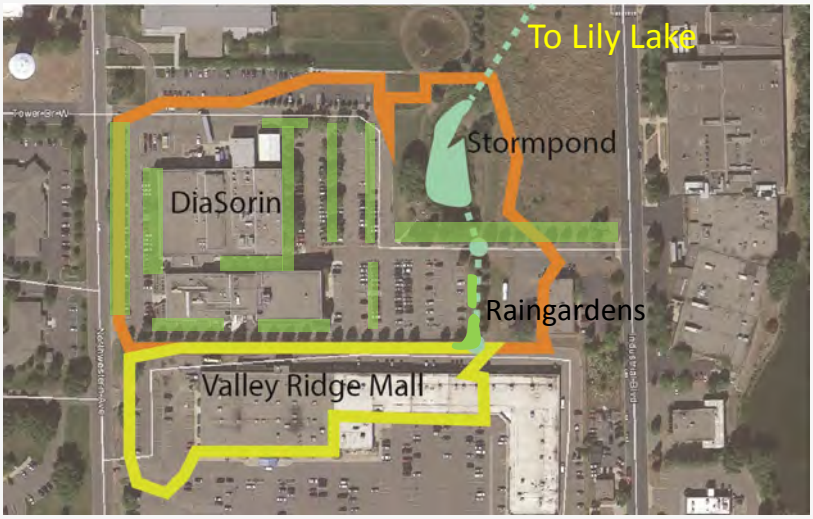
Installed 10,000 cubic feet of live storage volume to retain stormwater runoff that was discharging to Lily Lake.

Use stormwater to irrigate turf and reduce annual stormwater discharges to Lily Lake by 6 acre feet.

Adjusted the outlet of the stormwater pond to increase storage for stormwater irrigation.

Reduced annual stormwater pollution loads discharging to Lily Lake. Modeled load reductions of installed practices are : 14.7 lbs./year Phosphorus and 4.35 tons/year Sediment.

Lily Lake Stormwater Retrofit Commercial Properties



Above: This project utilizes nutrient rich water from the stormwater pond to irrigate turf and reduce annual stormwater discharges to Lily Lake by 6 acre feet. Irrigated areas are highlighted green.

Right and Below: These two large biofiltration cells that capture the first flush of pollutants rinsed off parking lots and roof tops. The biofiltration cells remove coarse sediment and 5.9 lbs phosphorus annually. Higher flows are diverted to the stormwater pond to control the rate of stormwater flows and retain nutrient rich stormwater for irrigation.