



Mirror Lake Rehabilitation



CLIENT

Mirror Lake—Lake Association

PROJECT LOCATION

Lake Delton,
Wisconsin

PROJECT DESCRIPTION Mirror Lake is Wisconsin's oldest man-made lakes and one of the most beautiful. The dam was originally built in 1857. Steep sandstone bluffs, up to 50 feet in height encircle the lake. In 1966, the Mirror Lake State Park opened. It currently includes over 2,000 acres and over 70 percent of the lake shoreline.

Over the years, the water quality of Mirror Lake has declined due to the excessive inflow of sediment and nutrients. From Dell Creek alone, the annual inflow of sediment into Mirror Lake is estimated to be 4,285 cubic yards. This is equal to roughly 285 dump trucks of sediment per year. Dell Creek, Mirror Lake's largest watershed, was designated a Priority Watershed in 1995.

Vierbicher has worked with Mirror Lake since 1999 to plan and implement a lake rehabilitation program. This on-going program has included the following activities:

- Lake Improvement Plan
- Sediment Trap Feasibility Study
- Lake Management & Protection Grants Totally Over \$1MM
- Creation of a Lake Protection District
- Sediment Trap Design and Permitting
- Navigational Dredging Design and Permitting
- Dredging Construction Administration

The construction of the sediment trap and navigational dredging was completed in 2008. The sediment trap is estimated to trap 70% of the 4,285 cubic yards of sediment entering the lake from Dell Creek each year. The construction of the gully and streambank stabilization was completed in 2010 and is expected to reduce TSS 34%.