GRANT INFORMATION:

Oakwood Hills received a Conservation 2000 Priority Lake and Watershed Implementation Program grant to fund this project.

The Priority Lake and Watershed Implementation Program (PLWIP) began in July 1997 with funds provided through "Partners for Conservation", a long-term, comprehensive, Illinois natural resource protection bill.

PLWIP is a reimbursement grant program designed to support lake protection, restoration and enhancement activities at "priority" lakes where causes and sources of problems are apparent, project sites are highly accessible, project size is relatively small and local entities are in a position to quickly implement needed treatments.

AREA FACTS:

- Silver Lake is a gravel-based, forty-seven acre, spring-fed body of water. It contains northern pike, walleye, largemouth bass, smallmouth bass, catfish, various panfish, rock bass and carp.
- The Village Community Park is forty-two acre area including an Illinois Nature Preserve fen. The fen is managed by the McHenry County Conservation District. The park sports a baseball diamond, volleyball court, basketball court and nature trails through wooded ravines.
- In 2012, Silver Lake was the site of the Naval Reserve Naval Experimental Diving Unit's annual Ice Dive. This dive is a training exercise for the dive team based out of the Naval Station Great Lakes.

FEATURED NATIVE PLANTS:



Gray-headed Coneflower









BIOINFILTRATION BASIN PROJECT

SILVER LAKE

Switchgrass

PROJECT OVERVIEW:

The Village of Oakwood Hills is dedicated to improving the water quality of Silver Lake and the adjacent Oakwood Hills Fen. Untreated runoff from residential areas and roadways discharged directly into Silver Lake at the two project locations, Birch Lane and West Woodland Road. This untreated discharge caused erosion and contributed to sedimentation and pollutants entering Silver Lake and ultimately into the fen. To improve water quality, the Village of Oakwood Hills secured a grant from the Illinois EPA and installed a bioinfiltration basin at each site.

PROJECT BENEFITS:

- Reduce runoff volume
- Filter pollutants and plant material
- Recharge groundwater
- Reduce stormwater temperature impacts
- Enhance aesthetics
- Provide pollinator plants

How IT WORKS:

Bioinfiltration basins intercept and hold stormwater runoff from each drainage area. The basins have deep rooted, perennial, salt tolerant plants that are adapted to fluctuating hydrologic conditions.

A planting plan was implemented with high quality native wetland and prairie plants. Native grasses and flowering species were installed, the planting plan included little bluestem, New England aster, switchgrass and blue vervain, as well as many others. The plan included live plants, to provide an immediate effect, as well as native seed, which takes a few seasons to establish.

An overflow stand pipe was installed in each basin to prevent the basin from overtopping and spilling into Silver Lake untreated. When storm events exceed the size of the basin, the water will be diverted into a stormwater structure. The stormwater will be pretreated in the basin by allowing the stormwater to pool, and allow sediments to settle out prior to overflowing into the stormwater containment structure. The containment structure allows rapid infiltration, which will allow the excess stormwater from the bioinfiltration basin to be filtered through the sandy/ gravelly underlying soils.

The bioinfiltration basins treat stormwater runoff through soil infiltration, absorption, trapping, filtering and bacterial degradation. This Best Management Practice (BMP) provides reduction in sediment, phosphorus, nitrogen, metals, dissolved pollutants, peak flow and erosion.

Rain gardens and bioinfiltration basins can have an 85% reduction in total suspended solids, 85% reduction in total phosphorus, and 30% reduction in nitrates.

PRAIRIE PLANTS

