

# LAKE OSAKIS - Tree Protection

**Year Constructed**  
2011

**Reinforcement**  
Geogrid

**Vegetation**  
Plant Plugs & Live Stakes

**Project Partners**  
Todd County SWCD

U of MN — Extension

U.S. Fish & Wildlife Service  
—Minnesota

Sauk River Watershed  
District

## + Project Snapshot

Battle Point Park on Lake Osakis experienced extreme erosive conditions due to ice heave, fetch, and wave action, which caused an undercut in the shoreline, endangering a heritage tree. The Envirolok system's combination of geotextile manufacturing with biological aspects of nature was the ideal solution. The engineered soil fill of the individual unit helps the system stand up to the pressure of ice heave by retreating from excess energy, something hard armor systems cannot. This allows the pressures to decrease at the point of contact and keeps the system growing strong over time. A geogrid wrapped face was implemented to aid in spreading out the forces from ice push. The site was vegetated with plant plugs and live stakes for a thriving native vegetation. Envirolok stabilized the eroding soil, protected the tree, and provided aesthetic, ecological, and biological services to the lake. To date, the site has been successful and the University of Minnesota — Extension continues to monitor and track the sites progression.

