

# CHAMBERLAIN



## Pre-Buffer Conditions

The shoreline along the Chamberlain property was actively eroding as were neighboring properties. The Chamberlains chose to use a bio-stabilization technique to protect their property which:

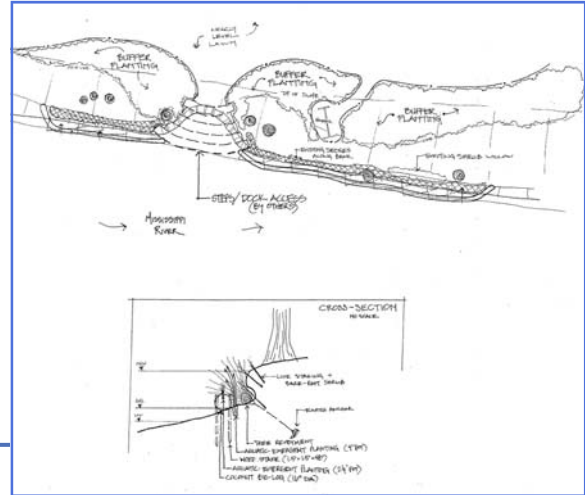
- Improves fish and wildlife habitat
- Is natural in appearance
- Is cost-effective



Actively eroding banks are threatening the trees near the shore (August 2003)



Turf reaching down to the water's edge is easily undermined due to the small root systems of lawns (August 2003)



The restoration plan is pictured above. The project is located on Levee Ave on the east bank of the Mississippi. Please respect private property!

## PROJECT SPECS

Date Planted .....	June 2004
Buffer Length .....	100 ft
Buffer Area.....	2,000 ft <sup>2</sup>
Natives Planted .....	860
Materials Cost Estimate .....	\$4,110
Labor Estimate .....	120 hrs
Cost-share Authorized .....	\$3,500



ANOKA  
CONSERVATION  
DISTRICT



### Installation

8' - 12' cedar trees were harvested with permission from a local property. Branches from one side of the tree were removed so the tree trunks fit tight up against the bank. Enough cedars were harvested to allow for a 2' overlap of the trees. Biologs were placed in front of the cedar trees to allow for increased sediment accumulation along the bank.

◀ March 2004

### Planting

The upland buffer was widened to improve the root structure within the bank and increase plant diversity. Aquatic vegetation was planted into the cedar revetments to help reduce water velocity along the bank after the cedars decay.

March 2004 ▶



### Site Monitoring

The completed planting will take several years to mature. During that time regular maintenance will be done to remove any problem species that appear such as buckthorn or thistle.

◀ June 2004

