

**Effingham County Soil and Water Conservation District**  
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Lake Sara Pilot Site – Eroding Banks Close to Playground



Lake Sara Pilot Site – Barge Laying 1<sup>st</sup> Stones



Lake Sara Pilot Site – Finished Transitional Wetland Riprap Breakwaters

### **Lake Sara Transitional Wetland Riprap Breakwaters**

Lake Sara has over 27 miles of shoreline. Five miles of undeveloped shore are directly controlled by the Effingham Water Authority (EWA). Included in this area are over 1 mile of unprotected bluffs which have experienced major erosion since lake creation in 1957. This has contributed to the lake's Section 303(d) "Impaired Lakes" status due to increases in suspended solids and manganese. Wildlife habitat and Post Oak Flatwoods Preserves are also being diminished. The Effingham County Soil and Water Conservation District helped fund through the Illinois Department of Agriculture CPP Special Projects grant program a pilot demonstration site utilizing riprap breakwaters would be located in a highly visible location from both the shore and water. This site tested the suitability of breakwater techniques utilized at other lakes, such as Kincaid and Mill Creek. The demonstration site accomplished the following:

1. Established Transitional Wetland Riprap barriers to protect 3 shoreline bluffs located adjacent to the EWA Community Building and children's play ground. The location is also highly visible from the water and dam road.
2. Addressed Impaired Waters concerns by improving water quality through reduced turbidity and manganese deposits in the lake water.
3. Stabilized bluff shorelines.
4. Protects Post Oak Flatwoods. The Lake Sara Preserve is part of the remaining original forests, which total only 500 acres statewide.
5. Measured the effectiveness of this technique for Lake Sara specific soils and water conditions.
6. Increased littoral vegetation, resulting in improved wetland wildlife habitat and lake aesthetics.
7. Improved the lake fishery.
8. Gave the Effingham Water Authority experience in implementing and maintaining this type of breakwater technique.
9. Reduced potential future dredging costs. Lake Decatur has experienced up to \$5 dredging cost avoidance for every dollar spent for erosion control.
10. Served as a demonstration site for EWA outreach programs to educate the Effingham community on the benefits of erosion control actions. Presentations will be made to organizations such as the Lake Sara Good Neighbors Association, Effingham Rotary, etc. to garner their support for more major erosion control projects and expand erosion control actions to private lessee shorelines.

The demonstration site also increased community awareness and commitment to the importance of erosion control and educate private owners about techniques they can utilize to stabilize their own shorelines.

As well as this project, the Effingham County SWCD has provided financial and/or technical assistance to landowners covering: over 5,200 feet of waterways; 4 rock chutes; 2,500 feet of Water and Sediment Control Basins; 4 Well Decommissionings; and planted over 775 acres of wildlife habitat.

**Please contact the Effingham County Soil & Water Conservation District for more information on projects and activities with the area**