

# LAKE AVENUE DEAD END STREET PROJECT

## VEGETATED SWALE WITH ROCK CHECK DAMS

Lake Avenue in Chisago City is a dead-end street that stops on the shores of Chisago Lake. The storm drain network also outlets at the bottom of this road, directly into the lake. The street is only used in the winter for access to the frozen lake. The road surface is in very poor condition. Upstream from the pipe outlet, a 2.5 acre watershed contributes runoff water to the system.

The goal of this project was to treat the stormwater runoff before it outlets into Chisago Lake so that excess nutrients, sediment, chemicals, and other pollutants could be filtered out of the water. The water was also causing a gully at the bottom of the road due to the very low lake levels and exposed lake bed.

One half of the road was removed and replaced with a series of vegetated basins and rock check dams. The stormwater pipe was also daylighted early, so that the water enters the basins before reaching the lake. Water fills the basins and overflows through the rock to the next lower basin. The water in the basins can soak into the ground, where it is filtered. Winter access to the lake is maintained in a single-lane drive.



### Partners:

Chisago Lakes LID  
Chisago City  
Chisago SWCD

### Pollution Reduction:

Total Suspended Solids (TSS):  
1,606 lb/yr  
Total Phosphorus (TP):  
3.9 lb/yr  
Volume: 3.1 ac-ft/yr

### Targeted Water:

Chisago Lake

### Completion Date:

August 2014

### May I Visit?

Yes – the project is located at the intersection of Lake Avenue and Wallmark Street in Chisago City.

