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## 2012 Round Lake Watershed Project

Client: Round Lake Property Owners Association



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## **SCOPE OF PROJECT**

The scope of this project was to establish elevations for several benchmarks on the Round Lake watershed. The benchmarks are as follows:

1/2" Aluminum rod at the Linden Road boat landing on the north side of Round Lake.

Existing benchmark on the C.T.H. "B" bridge between Round Lake and Little Round Lake.

Benchmark 1127-C near the bridge on Carlson Road at the outlet of Little Round Lake.

Benchmark 1127-E near the culverts for Osprey Creek on C.T.H. "NN".

1/2" Aluminum rod at the boat landing on the south side of Osprey Lake.

The project also included establishing elevations at a beaver dam in Osprey Creek between the outlet of Osprey Lake and the culverts on C.T.H "NN", an elevation in the "old" channel between Little Round Lake and Osprey Lake, a benchmark on private property on Osprey Lake and two additional benchmarks on Little Round Lake.

## **METHODS**

Data was collected using Leica 1200 series RTK GPS equipment. To maximize accuracy using different satellite configurations, data was collected for each benchmark six times over the course of three days, and each session consisted of 25-30 observations. The benchmarks were also observed from two different Sawyer County GPS Monuments, GPS Monument 108 – Round Lake and GPS Monument No. 100 – Marple. The final results are the average of 150+/-individual observations. The table on the following page notes the standard deviation for vertical accuracy for each benchmark.



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## Benchmark Data

Benchmark Name	NAVD 88 Elevation Latitude	Latitude	Longiude	Accuracy (Std. Deviation) Description	Description
Linden Boat Landing	1348.52	46°01'28.055" N	46°01'28.055" N  91°19'47.384" W  0.007	0.007'	1/2" alum. rod
C.T.H "B" Bridge	1347.77	45°59'22.527" N	45°59'22.527" N 91°18'57.798" W 0.001	0.001'	Top of bolt nw'ly bridge abut.
1127-C (Carlson Road)	1353.42	45°58'59.062" N	45°58'59.062" N 91°18'33.358" W 0.009'	0.009'	Brass cap
1127-E (C.T.H. "NN")	1350.71	45°58'20.459" N	45°58'20,459" N 91°19'01.452" W 0.008	0.008'	Brass cap
Osprey Lake Boat Landing 1346.1		45°58'22.566" N	45°58'22.566" N   91°17'54.534" W   0.004	0.004	1/2" alum. rod