

Theodore Robinson, *Boats at a Landing*, 1894

Shoreland Inventory of Comfort Lake, Chisago County

Date of Inventory: October 9 - November 2, 1998

Prepared by: Steve McComas, Blue Water Science

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Shoreland Assessment

The shoreland area encompasses three components: the upland fringe, the shoreline, and shallow water area by the shore. Several projects were conducted in the shoreland including a shoreland inventory, shallow water conductivity survey, and an on-site wastewater treatment system survey.

Shoreland Inventory: A photographic inventory of the Big Comfort Lake shoreline was conducted from October 9 through November 2, 1998. The objectives of the survey were to characterize existing shoreland conditions to serve as a benchmark for future comparisons.

For each photograph we looked at the shoreline and the upland condition. Our criteria for a natural upland was the presence of 50% native vegetation in the understory.

Results of the inventory are shown in Table 1. Based on our subjective criteria over 50% of the parcels in the Big Comfort Lake shoreland area meet the natural rankings for shorelines and upland areas. For a lake in the urban/rural transition zone this is about normal. However in the next 10 years proactive volunteer native landscaping could maintain existing conditions and improve other parcels.

A map shows segments of Big Comfort shorelines have up to 90% natural conditions. The north east end has less than 30% (Figure 1).

Table 1. Summary of buffer and upland conditions in the shoreland area of Big Comfort Lake. Approximately 100 parcels were examined.

| | Percent |
|--|---------|
| Shorelines with >50% natural buffer | 61% |
| Upland areas >50% natural conditions | 62% |
| Lots with both natural buffers and upland conditions | 52% |
| Lots with rip-rap or retaining walls. | 12% |

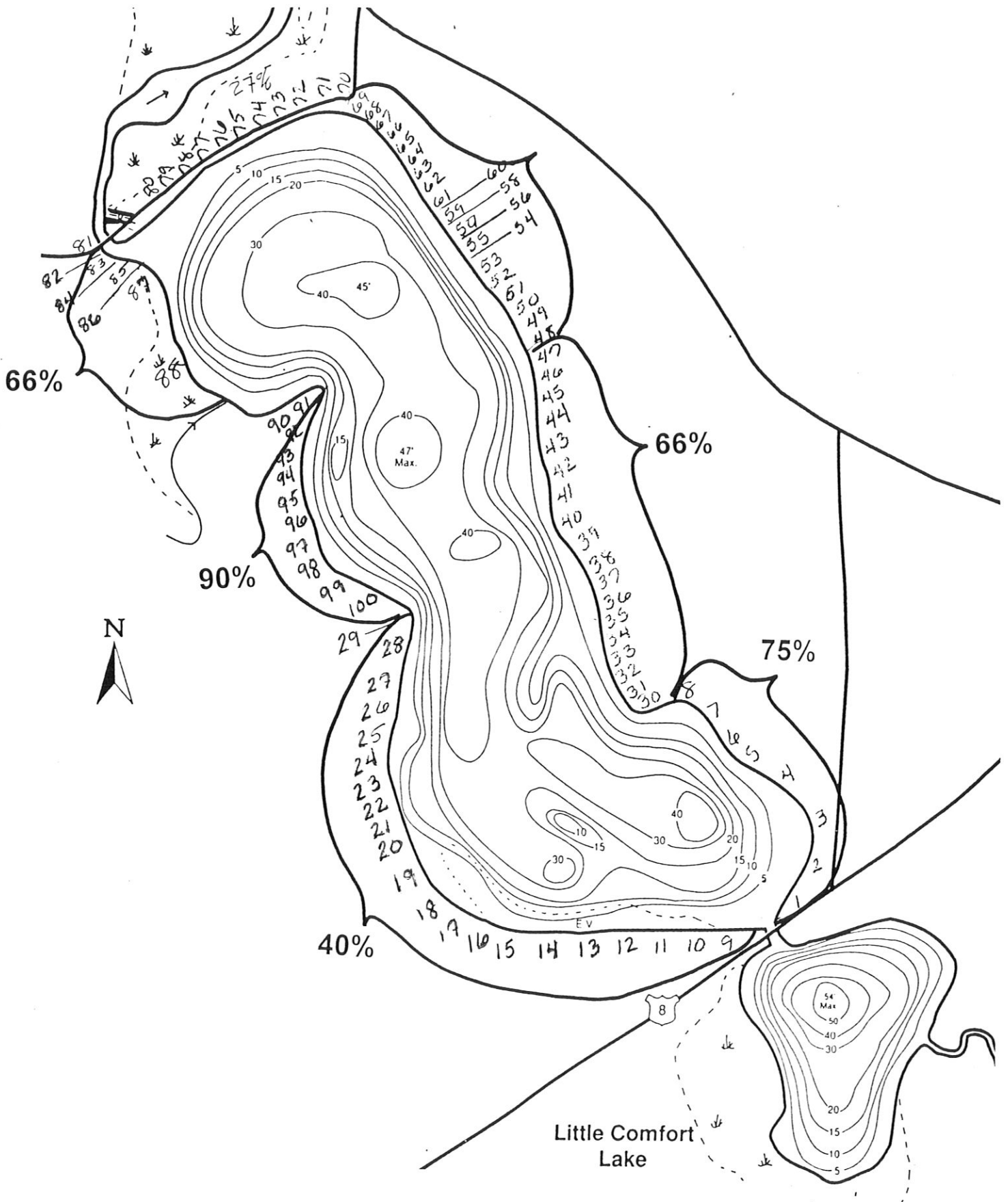


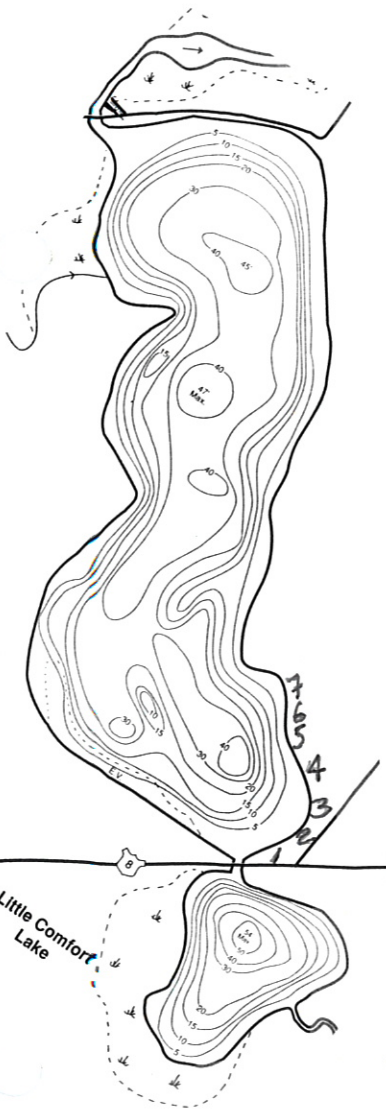
Figure 1. The percent of parcels meeting natural shoreline criteria for shoreland segments on Big Comfort Lake. Survey was conducted from October 9 - November 2, 1998.

Table 2. Shoreland evaluation for individual parcels. Shoreline buffer and upland conditions were ranked on a scale from 0 to 10. A "10" represented 100% natural conditions and "0" represents 0% natural conditions.

| Parcel | Natural Shoreline Buffer Condition | Natural Upland Condition | Docks | Boat Count | | Shoreland Meets Goal | Comments |
|--------|------------------------------------|--------------------------|-------|------------|-------|----------------------|---|
| | | | | Pontoon | Other | | |
| 1 | 9 | 9 | 1 | 1 | 1 | Y | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | 0 | 6 | 1 | | 1 | N | |
| 6 | 8 | 8 | 1 | 1 | | Y | |
| 7 | 7 | 2 | 0 | | | N | |
| 8 | 10 | 10 | 0 | | | Y | |
| 9 | 9 | 0 | 0 | | | N | Hwy 8. |
| 10 | 7 | 1 | 1 | | | N | Needs upland work. |
| 11 | 0 | 0 | 1 | | | N | Access ramp is concrete. |
| 12 | 7 | 2 | 0 | 0 | 1 | N | |
| 13 | 9 | 7 | 0 | 0 | 0 | Y | |
| 14 | 5 | 8 | 0 | 0 | 0 | Y | |
| 15 | 5 | 1 | 1 | 0 | 1 | N | |
| 16 | 7 | 7 | 0 | 1 | 0 | Y | |
| 17 | 10 | 10 | 0 | 0 | 0 | Y | |
| 18 | 8 | 8 | 1 | 1 | 0 | Y | |
| 19 | 9 | 9 | 0 | 0 | 0 | Y | |
| 20 | 7 | 6 | 0 | 0 | 0 | Y | |
| 21 | 1 | 1 | 0 | 1 | 2 | N | Native upland & shoreline lacking, boat house, ice ridge present. |
| 22 | 1 | 1 | 0 | 0 | 1 | N | |
| 23 | 3 | 5 | 1 | 0 | 1 | N | Riprap shoreline. |
| 24 | 2 | 1 | 1 | 0 | 1 | N | Cattails present. |
| 25 | 7 | 1 | 1 | 0 | 1 | N | Cattails present. |
| 26 | 0 | 1 | 1 | 0 | 1 | N | |
| 27 | 6 | 7 | 0 | 1 | 0 | Y | |
| 28 | 1 | 2 | 0 | 0 | 1 | N | |
| 29 | 10 | 10 | 1 | 0 | 1 | Y | Natural shoreland condition. |
| 30 | 10 | 10 | 0 | 0 | 0 | Y | |
| 31 | 10 | 10 | 0 | 0 | 0 | Y | Blue house, cattails present. |
| 32 | 7 | 6 | 0 | 0 | 0 | Y | Cattail buffer partially removed recently. |
| 33 | 7 | 5 | 0 | 1 | 0 | Y | Partial cattail buffer. |
| 34 | 6 | 9 | 0 | 1 | 0 | Y | Partial cattail buffer. |
| 35 | 10 | 9 | 0 | 0 | 0 | Y | Full cattail buffer. |

| Parcel | Natural Shoreline Buffer Condition | Natural Upland Condition | Docks | Boat Count | | Shoreland Meets Goal | Comments |
|--------|------------------------------------|--------------------------|-------|------------|-------|----------------------|-------------------------------|
| | | | | Pontoon | Other | | |
| 36 | 10 | 8 | 1 | -- | -- | Y | Nearly full cattail buffer. |
| 37 | 9 | 6 | 1 | 1 | 0 | Y | Cattail buffer. |
| 38 | 10 | 10 | 0 | 0 | 0 | Y | |
| 39 | 10 | 8 | 1 | 1 | 0 | Y | |
| 40 | 10 | 9 | 0 | 0 | 0 | Y | |
| 41 | 10 | 5 | 1 | 0 | 0 | Y | |
| 42 | 2 | 4 | 1 | 0 | 0 | N | Cattail buffer removed. |
| 43 | 1 | 2 | 0 | 0 | 0 | N | |
| 44 | 2 | 2 | 0 | 0 | 0 | N | Slight shoreline erosion. |
| 45 | 1 | 1 | 0 | 0 | 0 | N | Slight shoreline erosion. |
| 46 | 4 | 7 | 0 | 0 | 0 | N | Slight shoreline erosion. |
| 47 | 4 | 8 | 1 | 0 | 3 | N | Slight shoreline erosion. |
| 48 | 1 | 2 | 0 | 0 | 0 | N | Vertical timber wall. |
| 49 | 5 | 8 | 0 | 0 | 0 | N | Wood retaining wall. |
| 51 | 2 | 4 | 1 | 0 | 0 | N | |
| 52 | 10 | 9 | 1 | 0 | 1 | Y | |
| 53 | 8 | 7 | 0 | 0 | 0 | Y | |
| 54 | 10 | 10 | 1 | 0 | 0 | Y | |
| 55 | 6 | 3 | 1 | 0 | 0 | N | Needs upland & thicker shore. |
| 56 | 9 | 9 | 0 | 0 | 0 | Y | |
| 57 | 10 | 9 | 1 | 0 | 0 | Y | |
| 58 | 1 | 2 | 0 | 0 | 0 | N | Riprap. |
| 59 | 1 | 2 | 0 | 0 | 1 | N | Riprap. |
| 60 | 1 | 2 | 0 | 0 | 1 | N | |
| 61 | 2 | 2 | 0 | 0 | 0 | N | |
| 62 | 3 | 4 | 1 | 1 | 0 | N | Riprap. |
| 63 | 3 | 3 | 1 | 0 | 0 | N | |
| 64 | 4 | 5 | 1 | 0 | 0 | N | |
| 65 | 6 | 7 | 1 | 0 | 0 | Y | |
| 66 | 1 | 3 | 1 | 1 | 0 | N | Rock riprap. |
| 67 | 1 | 1 | 1 | 1 | 1 | N | Rock riprap. |
| 68 | 1 | 1 | 1 | 0 | 0 | N | Rock riprap. |
| 69 | 1 | 1 | 0 | 0 | 0 | N | |
| 70 | 2 | 4 | 1 | 1 | 0 | N | |
| 71 | | 5 | 0 | 0 | 0 | N | Rock riprap. |
| 72 | 3 | 4 | 1 | 0 | 0 | N | Rock riprap. |
| 73 | 2 | 3 | 1 | 1 | 0 | N | Rock riprap. |
| 74 | 4 | 5 | 1 | 1 | 0 | N | |
| 75 | 10 | 10 | 0 | 0 | 0 | N | |
| 76 | 4 | 5 | 1 | 1 | 1 | N | |
| 77 | 0 | 1 | 1 | 1 | 1 | N | Structure on the shoreline. |

| Parcel | Natural Shoreline Buffer Condition | Natural Upland Condition | Docks | Boat Count | | Shoreland Meets Goal | Comments |
|--------|------------------------------------|--------------------------|-------|------------|-------|----------------------|-----------------|
| | | | | Pontoon | Other | | |
| 78 | 2 | 2 | 0 | 1 | 0 | N | |
| 79 | 7 | 7 | 1 | 0 | 0 | Y | |
| 80 | 8 | 8 | 0 | 0 | 0 | Y | |
| 81 | 7 | 7 | 1 | 0 | 0 | Y | Public landing. |
| 82 | 10 | 10 | 1 | 0 | 0 | Y | |
| 83 | 10 | 10 | 0 | 0 | 0 | Y | Open land. |
| 84 | 5 | 5 | 2 | 1 | 0 | Y | |
| 85 | 1 | 2 | 1 | 0 | 0 | N | |
| 86 | 2 | 4 | 1 | 0 | 0 | N | |
| 87 | 2 | 4 | 1 | 1 | 0 | N | |
| 88 | 10 | 10 | 0 | 0 | 0 | Y | |
| 89 | 10 | 10 | 0 | 0 | 0 | Y | |
| 90 | 10 | 10 | 0 | 0 | 0 | Y | |
| 91 | 10 | 10 | 0 | 0 | 0 | Y | |
| 92 | 10 | 10 | 1 | 1 | 0 | Y | |
| 93 | 4 | 5 | 1 | 1 | 0 | N | |
| 94 | 9 | 9 | 1 | 0 | 1 | Y | |
| 95 | 5 | 5 | 0 | 0 | 0 | Y | |
| 96 | 5 | 6 | 1 | 1 | 0 | Y | |
| 97 | 10 | 10 | 1 | 0 | 1 | Y | |
| 98 | 10 | 10 | 1 | 0 | 0 | Y | |
| 99 | 10 | 10 | 0 | 0 | 0 | Y | |
| 100 | 50 | 50 | 0 | 0 | 0 | Y | Park?? |
| TOTALS | -- | -- | 50 | 24 | 24 | 48=Y | |



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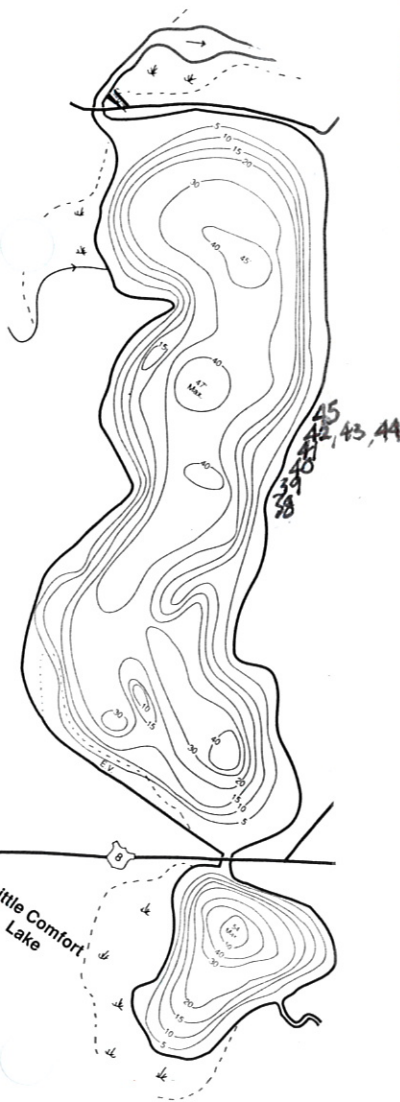
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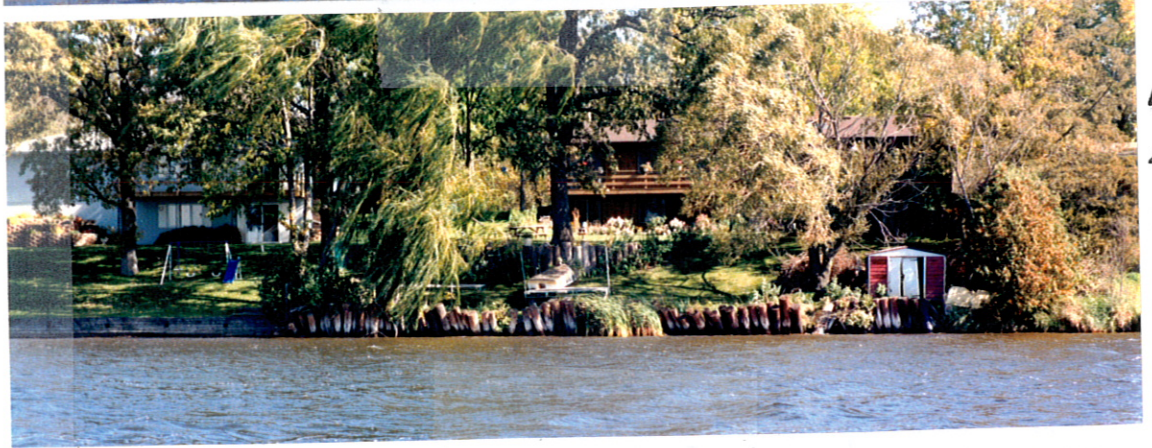


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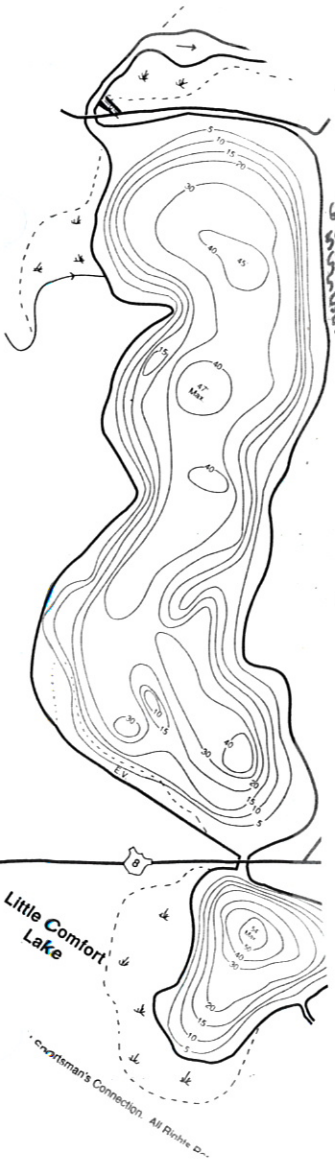
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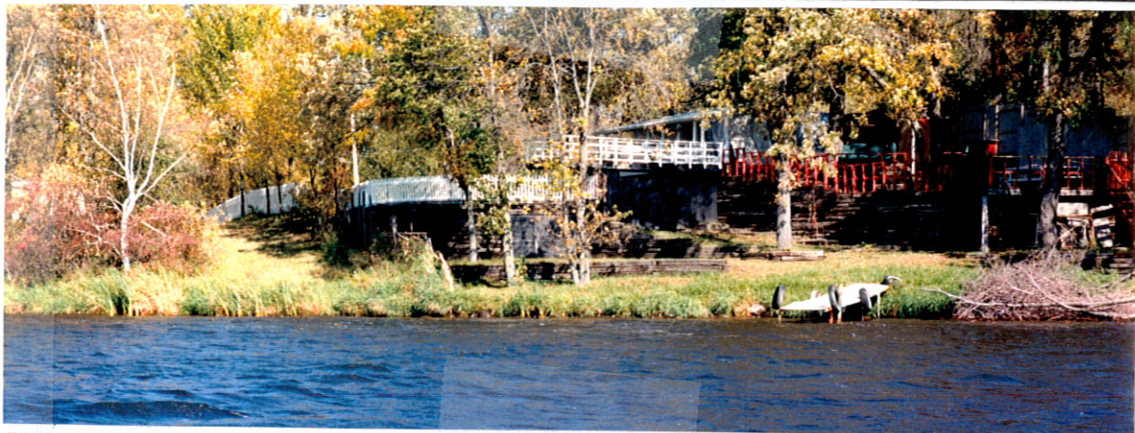


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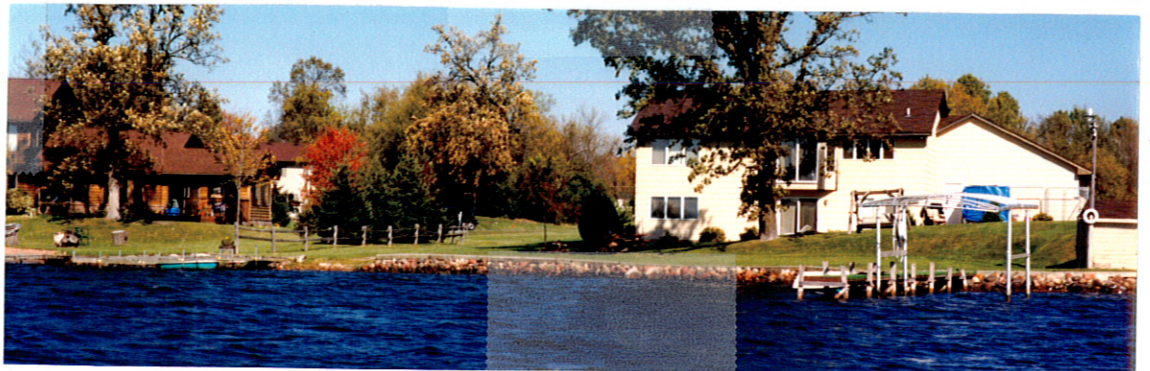
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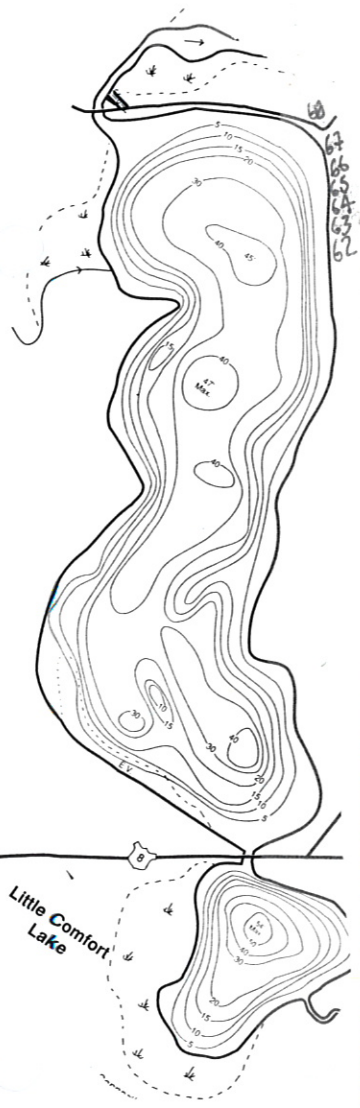
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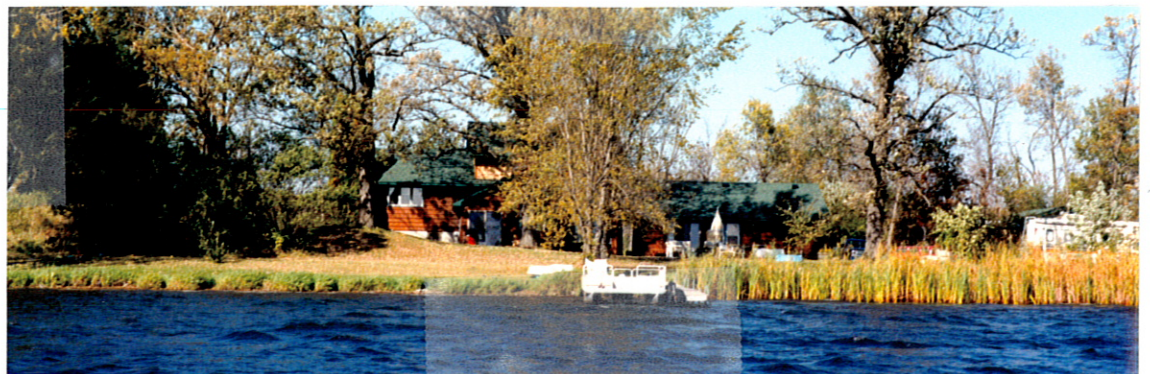
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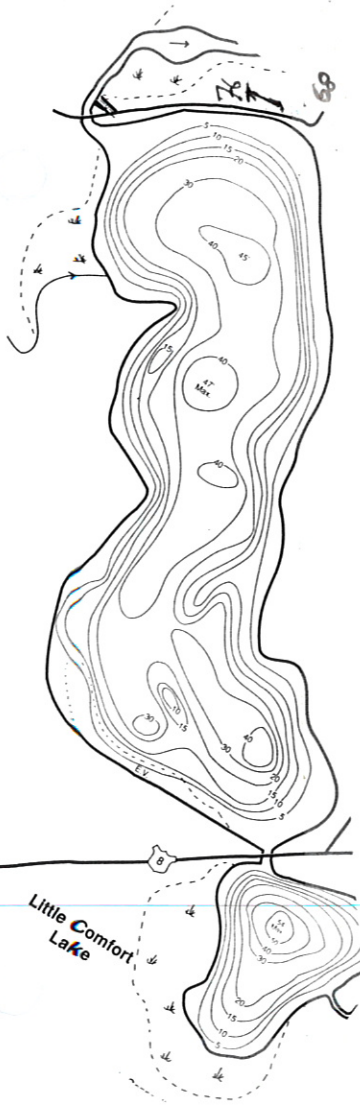
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Boat
Landing
(81)





Boat
Land
(81)



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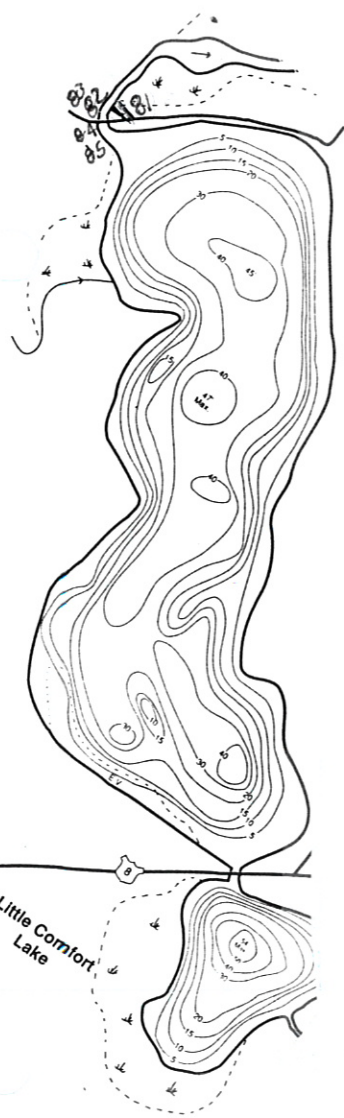
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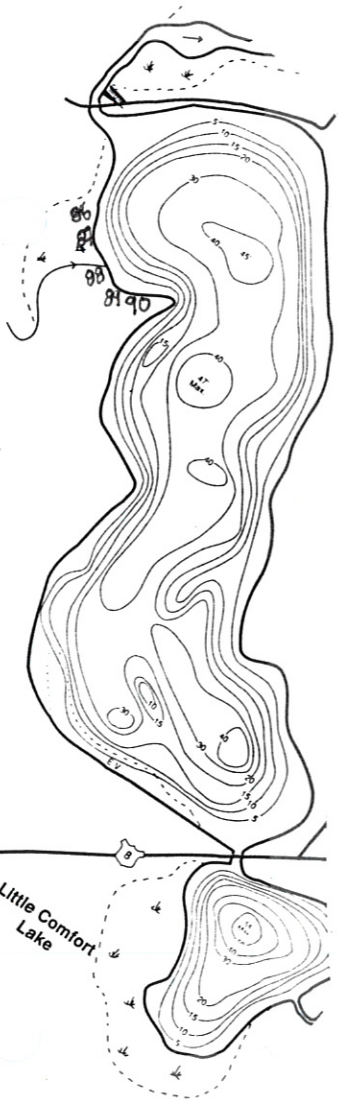
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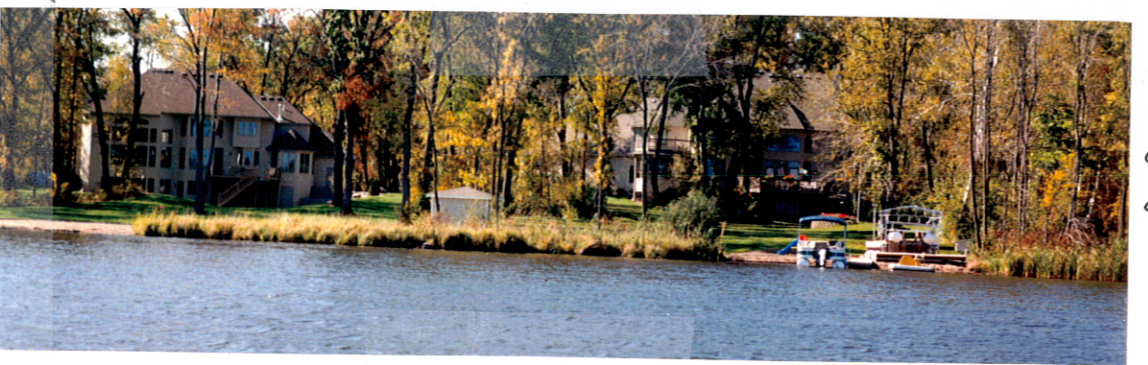


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