

Lake Beulah is an 834 acre drainage lake, with a maximum depth of 58 feet and an average depth of 17 feet. The water clarity at Lake Beulah typically ranges between 6 and 11 feet during the summer. There are eight areas in Lake Beulah identified as sensitive. Each of these areas possesses characteristics which are beneficial to the lake as a whole. Their protection will help to preserve the quality of the water in Lake Beulah. A brief description of the eight identified sensitive areas follows:

- Sensitive Area 1 is located along the eastern shore of Jesuit island in the northeastern part of the lake.
- Sensitive area 2 is a small cove located across from Jesuit island.
- Sensitive area 3 is located around a small island along the northeastern shore of the lake.
- Sensitive area 4 is located along the southern shore of the lake in the area also know as Mueller's Cove.
- Sensitive area 5 is in the south shore cove area, located on the southern shore of the eastern end of the lake.
- Sensitive area 6 is located in the narrows between the two basins of the lake.
- Sensitive area 7 is located in the bay near the inlet form Pickerel Lake in the southwestern part of the lake.
- Sensitive area 8 is located just southeast of the East Troy boat launch on the southwestern shore of the lake.

In general, these areas support a diverse community of native aquatic plants with limited areas of Eurasian water milfoil. They offer spawning and nursery areas for several fish species, nesting habitat for animals, act as a sediment and nutrient trap, as well as helping protect the shoreline from erosion.

Sensitive areas are determined by assessment of a team of scientists from the Wisconsin Department of Natural Resources, including fisheries, wildlife, water resources and water regulation and zoning staff. Each team member has expertise in areas relating to water quality and fish or wildlife biology and the ecological value of the area being assessed. The members of the team which investigated this area are:

Doug Welch (Fish Management)
Dan Helsel (Water Resources)

Mark Anderson (Wildlife Management)
Liesa Nesta (Water Regulation and Zoning)

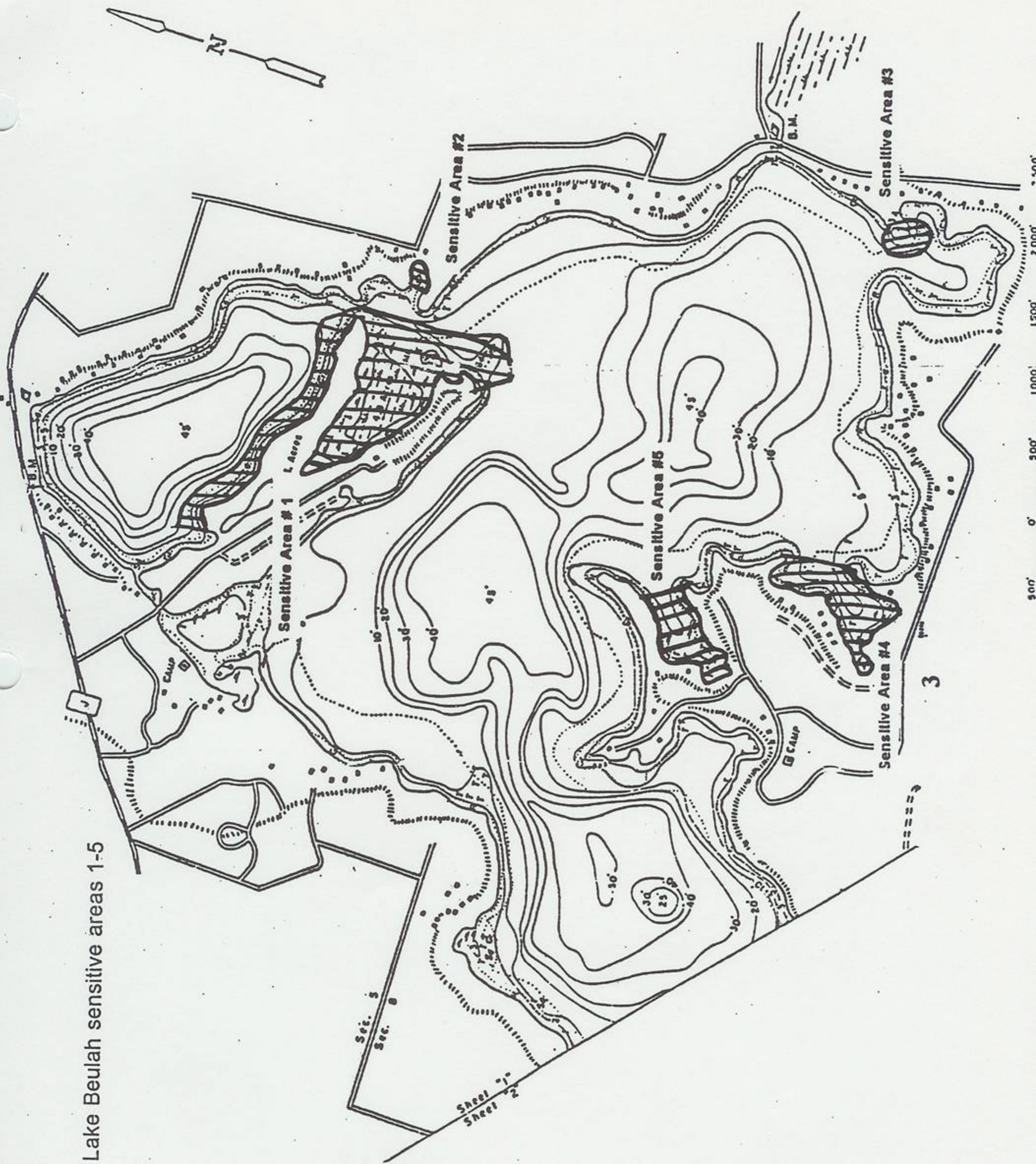


Figure 1. Lake Beulah sensitive areas 1-5

LAKE BEULAH SENSITIVE AREA STUDY

DNR WATER RESOURCES

MAY, 1994

INTRODUCTION

Lake Beulah is a valuable resource of the state of Wisconsin held in trust for the general public. The lake provides recreation, aesthetic enjoyment, opportunities for fishing and wildlife observation, boating and swimming. Lake Beulah has offered enjoyable conditions such as good water quality, abundant fisheries of good sized game fish and areas of aesthetic beauty.

The aquatic plants in this lake are a diverse community which has served the lake well, keeping nutrients and sediments to a minimum and providing valuable food and habitat for many desirable animals such as game fish and waterfowl.

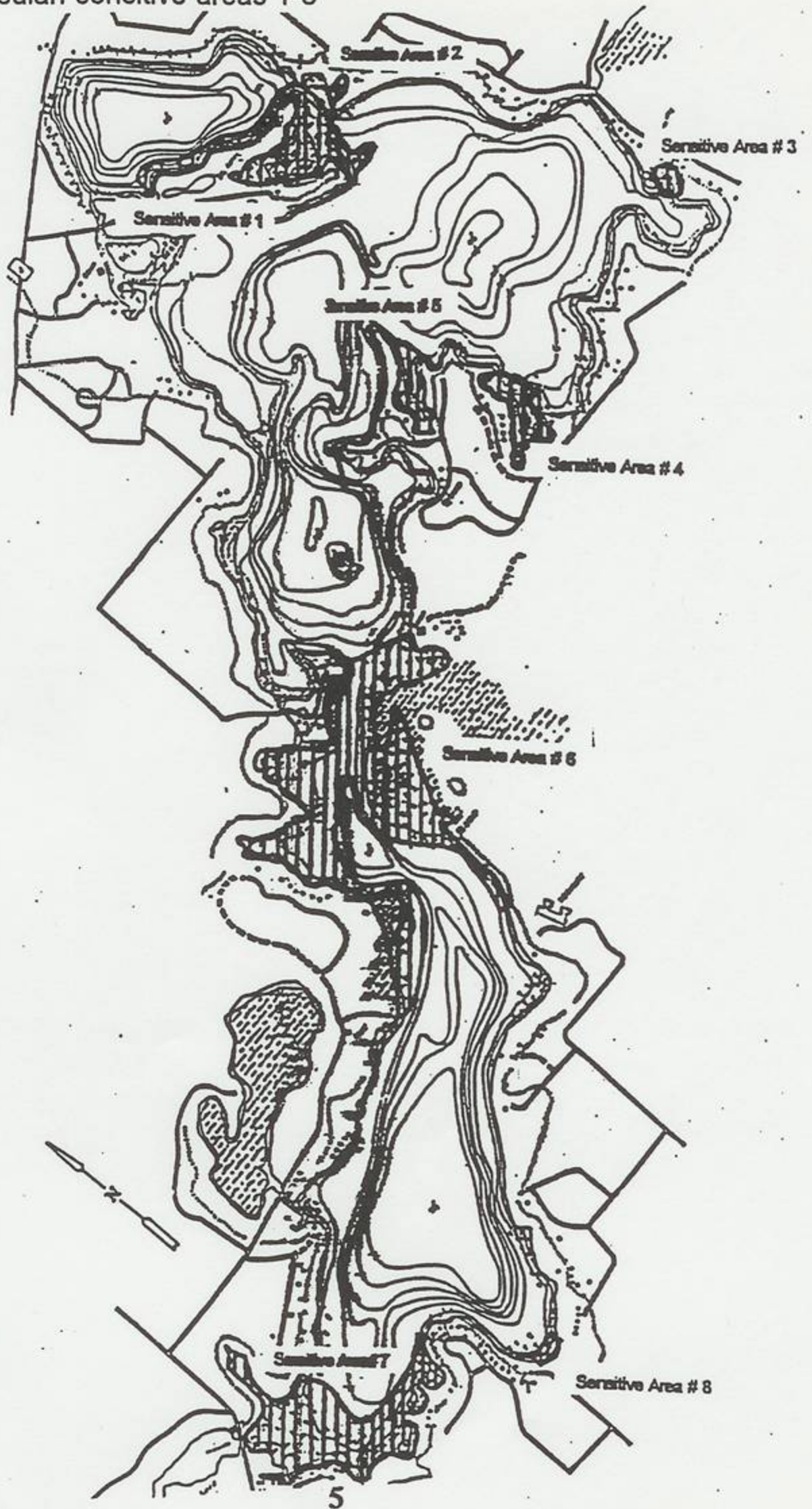
In July of 1993, Department of Natural Resources staff visited Lake Beulah for the purpose of identifying areas which are sensitive and therefor in need of extra protection. Areas are considered sensitive if they fall under the following definition:

"... areas of aquatic vegetation identified by the department as offering critical or unique fish and wildlife habitat, including seasonal or lifestage requirements, or offering water quality or erosion control benefits to the body of water." (NR 107, 1989)

These might include:

- Diverse stands of high quality native aquatic plants which help provide a buffer against invasion of Eurasian water milfoil, a very aggressive non native aquatic plant which is increasingly becoming a nuisance in Wisconsin's lakes.
- Areas of vegetation which trap sediments and nutrients flowing into the lake thereby improving water clarity and reducing available nutrients for undesirable plant growth.
- Areas of vegetation which offer spawning nesting or feeding habitat for fish or wildlife.
- Areas of vegetation whose species composition or hydrology make it an ecologically unique community.

Figure 3. Lake Beulah sensitive areas 1-8



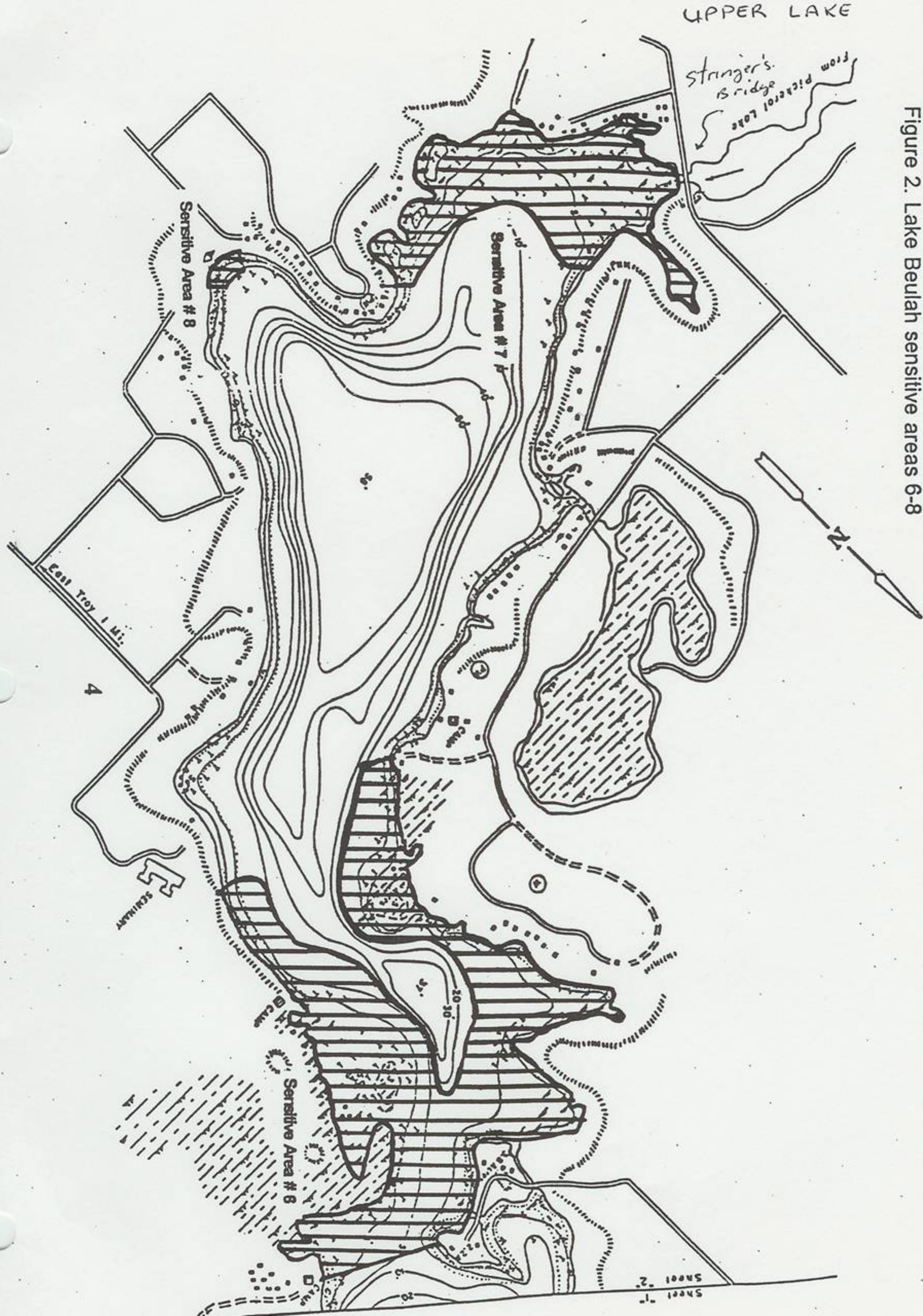


Figure 2. Lake Beulah sensitive areas 6-8