

A photograph of Silver Lake with sand dunes in the background. The lake is dark blue with small waves. The dunes are light tan and stretch across the horizon under a clear sky. In the bottom right corner, there is a logo for 'progressive' with a stylized 'ae' symbol.

Silver Lake Lake and Watershed Mapping Project

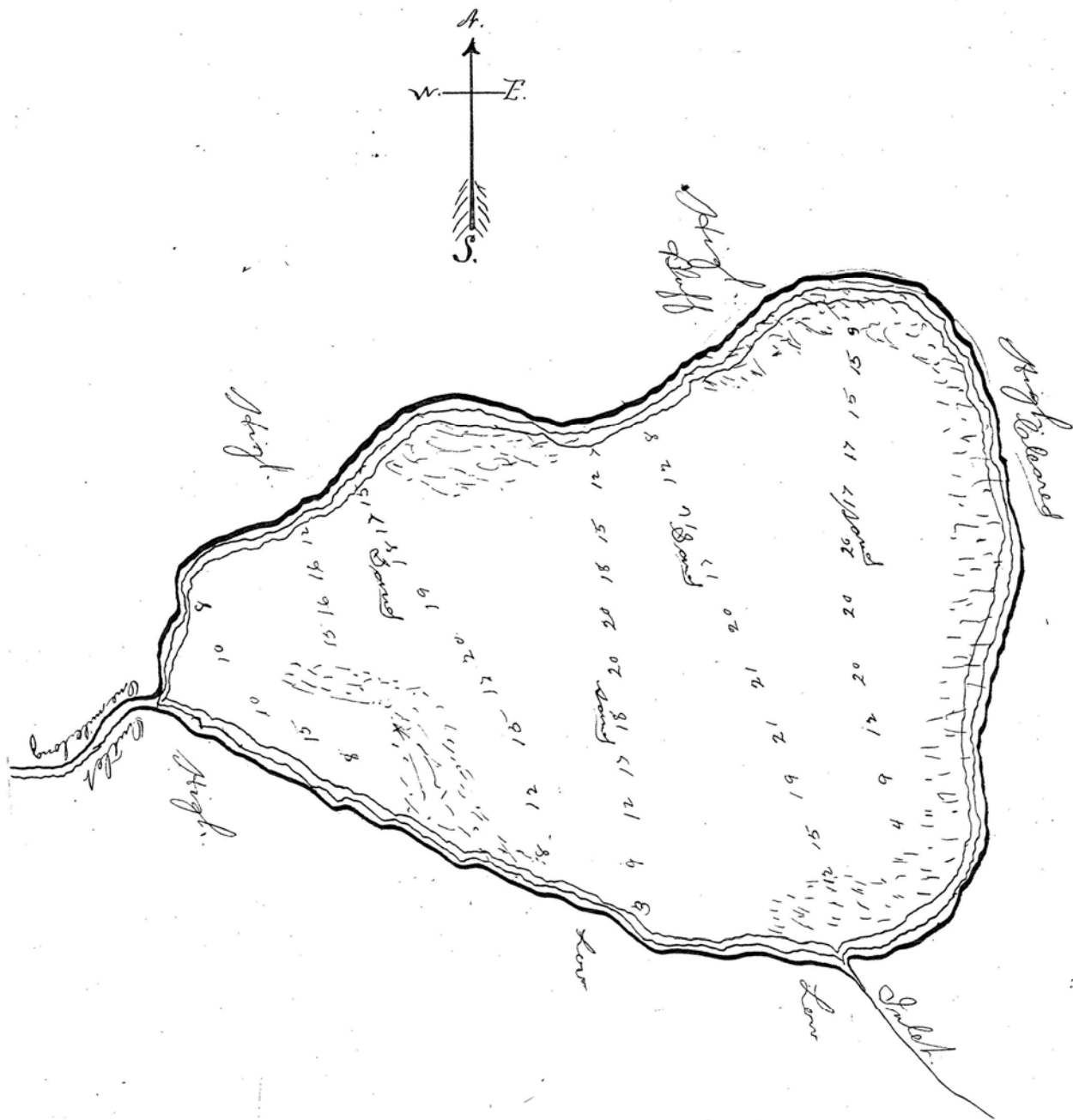
Prepared for:
The Silver Lake Improvement Board

Project Objectives

- Provide an updated depth contour map of Silver Lake and evaluate the impact of dune migration into the lake
- Evaluate Silver Lake watershed drainage characteristics









INSTITUTE FOR FISHERIES RESEARCH
 DIVISION OF FISHERIES MICHIGAN CONSERVATION DEPT.
 LAKE INVENTORY MAP
SILVER LAKE
 AREA 690 ACRES
 MARGINAL SURVEY AND SOUNDINGS 2/12,3,6,7,8,9,10,11/50
 INVENTORY 7/11-15/50
 OCEANA COUNTY T.15 N.R.18 W., SEC'S.19,20,29,30,31

LEGEND

BOTTOM

- Sand
- Gravel
- Marl
- Pulpy peat
- Pulpy peat and Sand
- Fibrous peat

OUTLINE & CONTOURS

- Shoreline
- Contours

SHORE FEATURES

- Encroaching shore
- Improved road
- Unimproved road
- Brush
- Wooded
- Partly wooded
- Inlet
- Outlet
- Intermittent inlet
- Spring

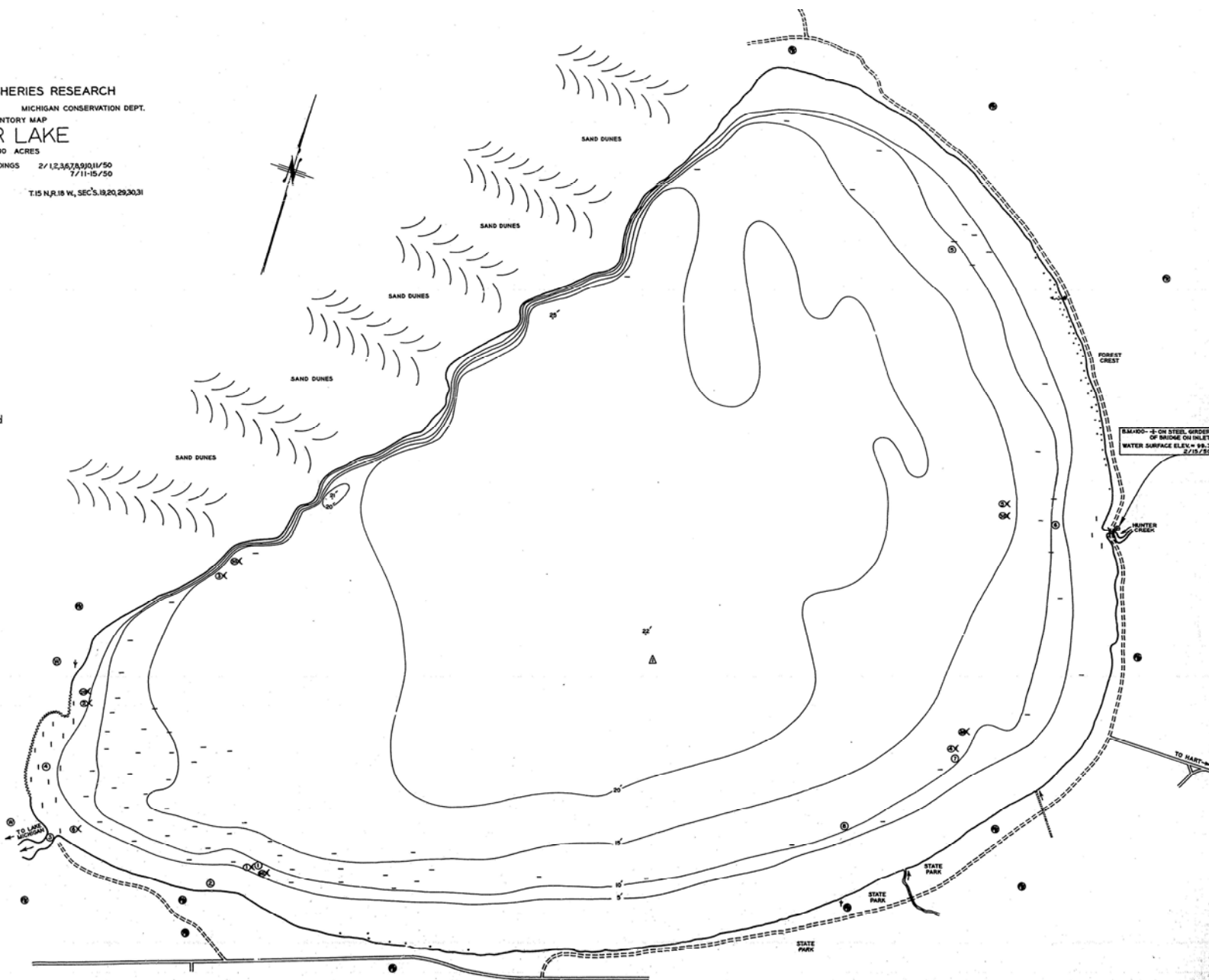
VEGETATION

- Emergent
- Submergent

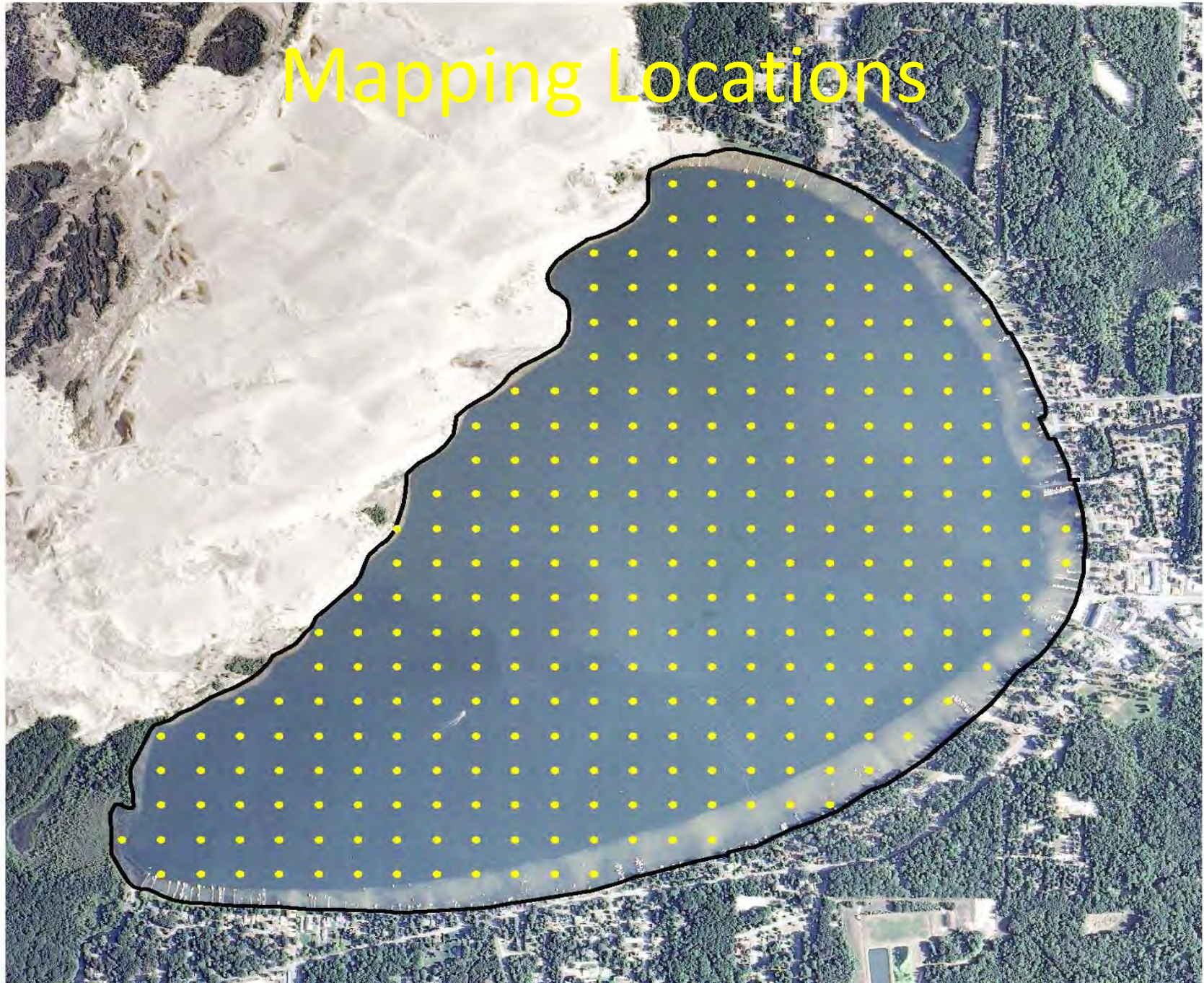
STATIONS

- Vegetation
- Temp, chem, analysis
- Fish sample

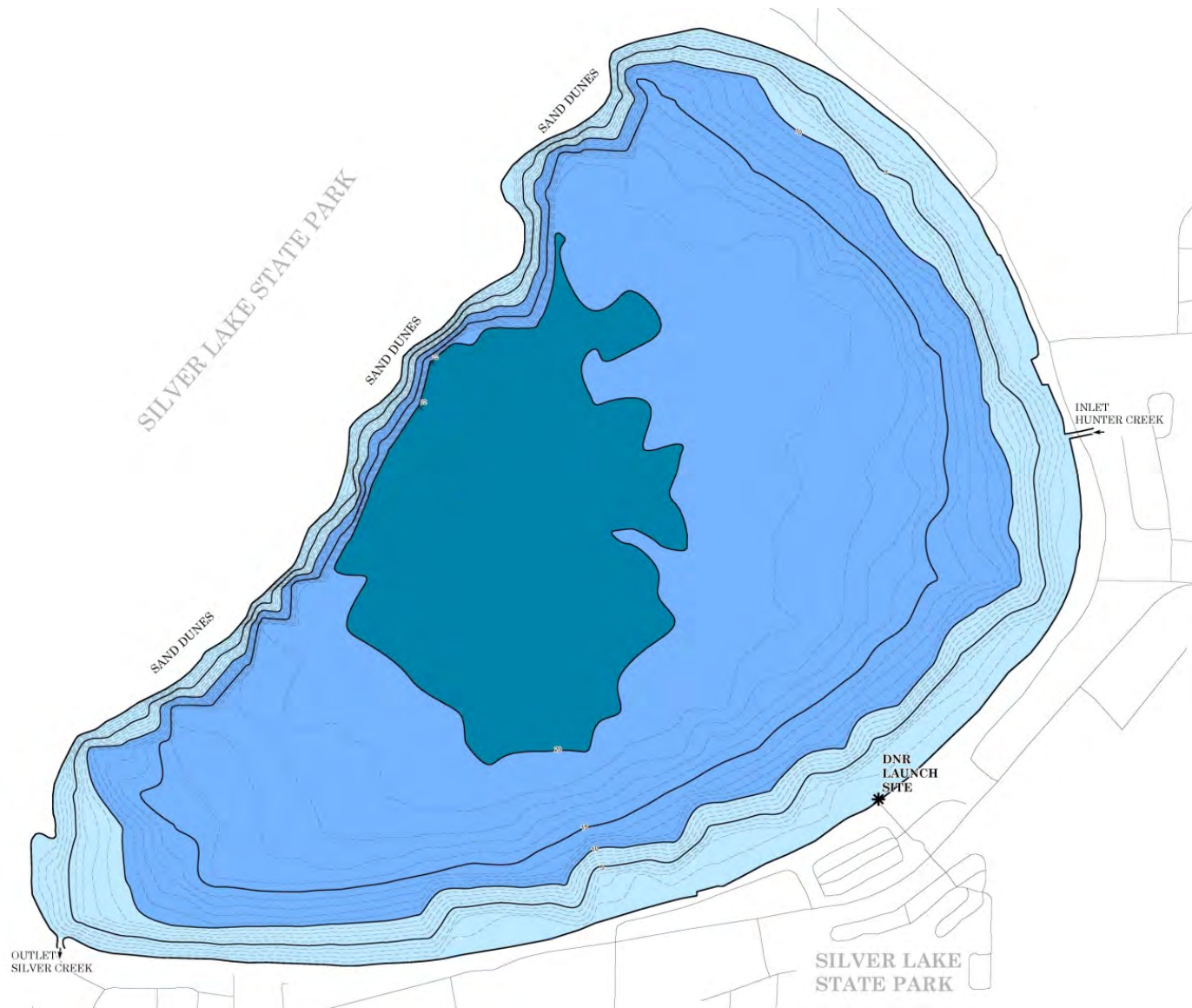
0 300' 600' 900' 1200'
 SCALE



Mapping Locations



Depth Contour Map







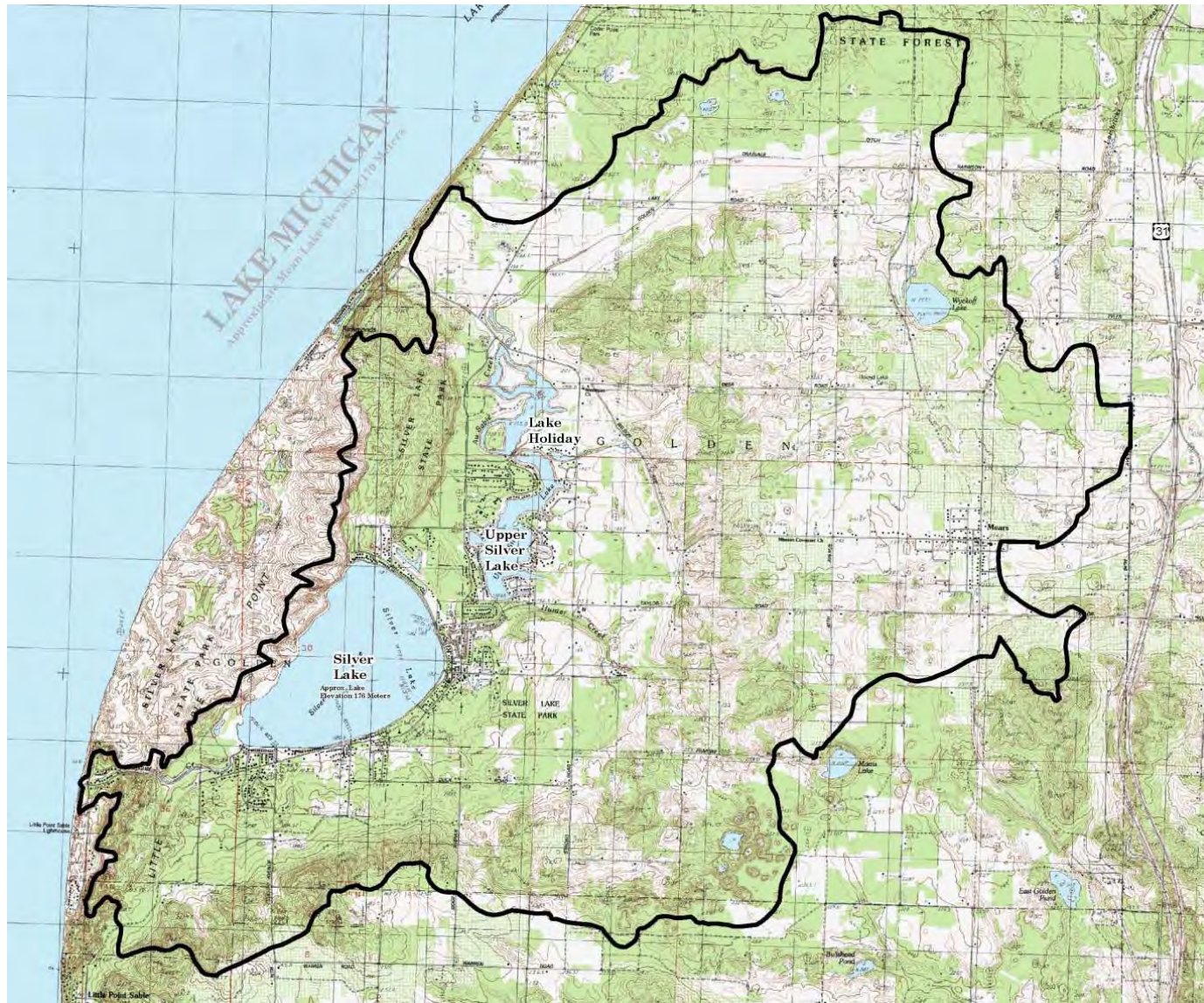
Silver Lake Physical Characteristics 1950 and 2012

Measurement	1950	2012	Difference
Lake Surface Area (acres)	690	672	-18 (3%)
Maximum Depth (feet)	25	22	-3 (12%)
Mean Depth (feet)	14.9	14.6	-0.3 (2%)
Lake Volume (acre-feet)	10,287	9,823	-464 (5%)

Silver Lake Watershed

- A **watershed** is the land area that drains to a lake.
- A watershed is sometimes referred to as a drainage or catchment basin.
- The Silver Lake watershed is 15,153 acres or 24 square miles---a land area about 22.5 times larger than the lake itself.

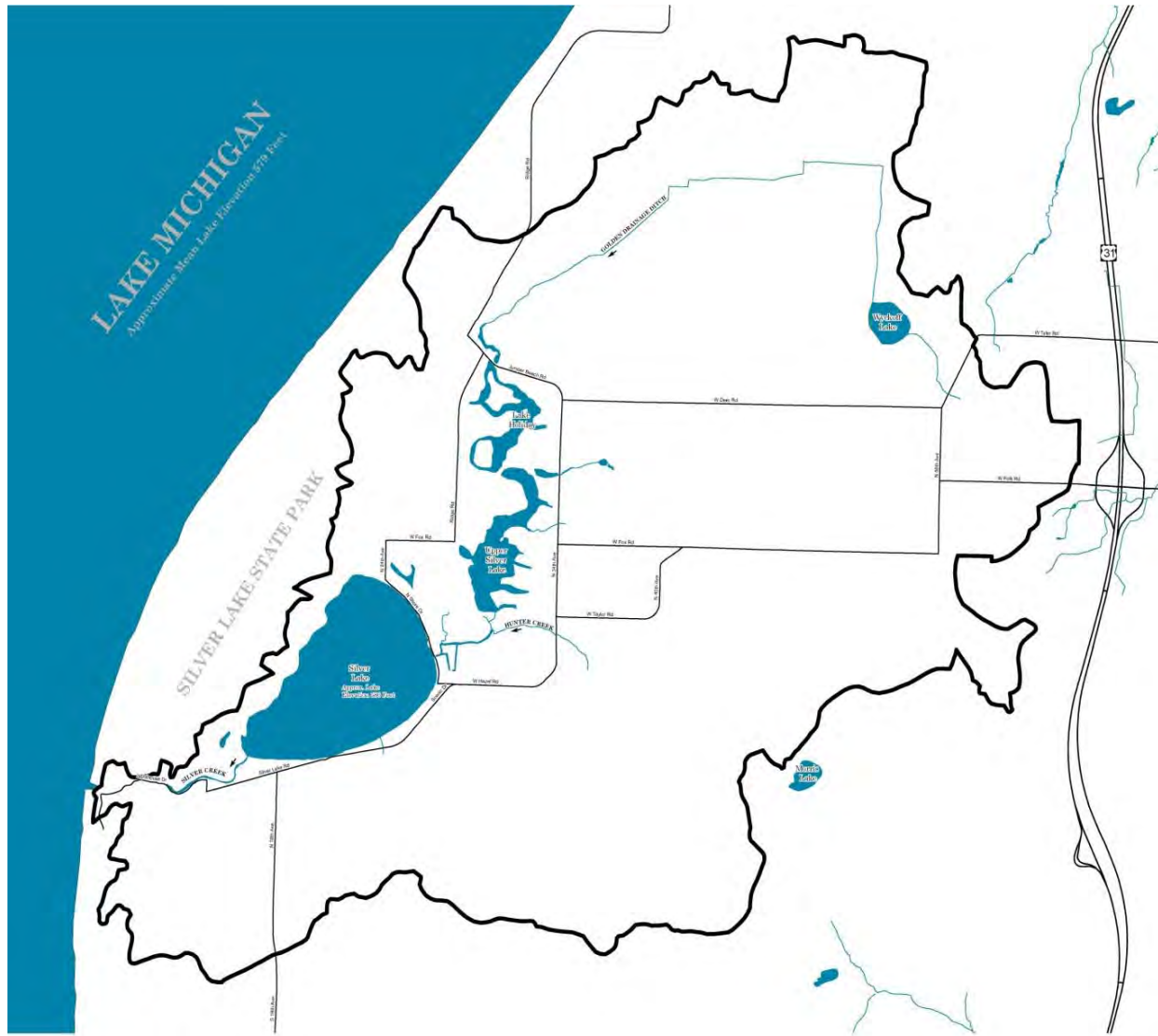
Silver Lake Watershed Map



Silver Lake Watershed 3D

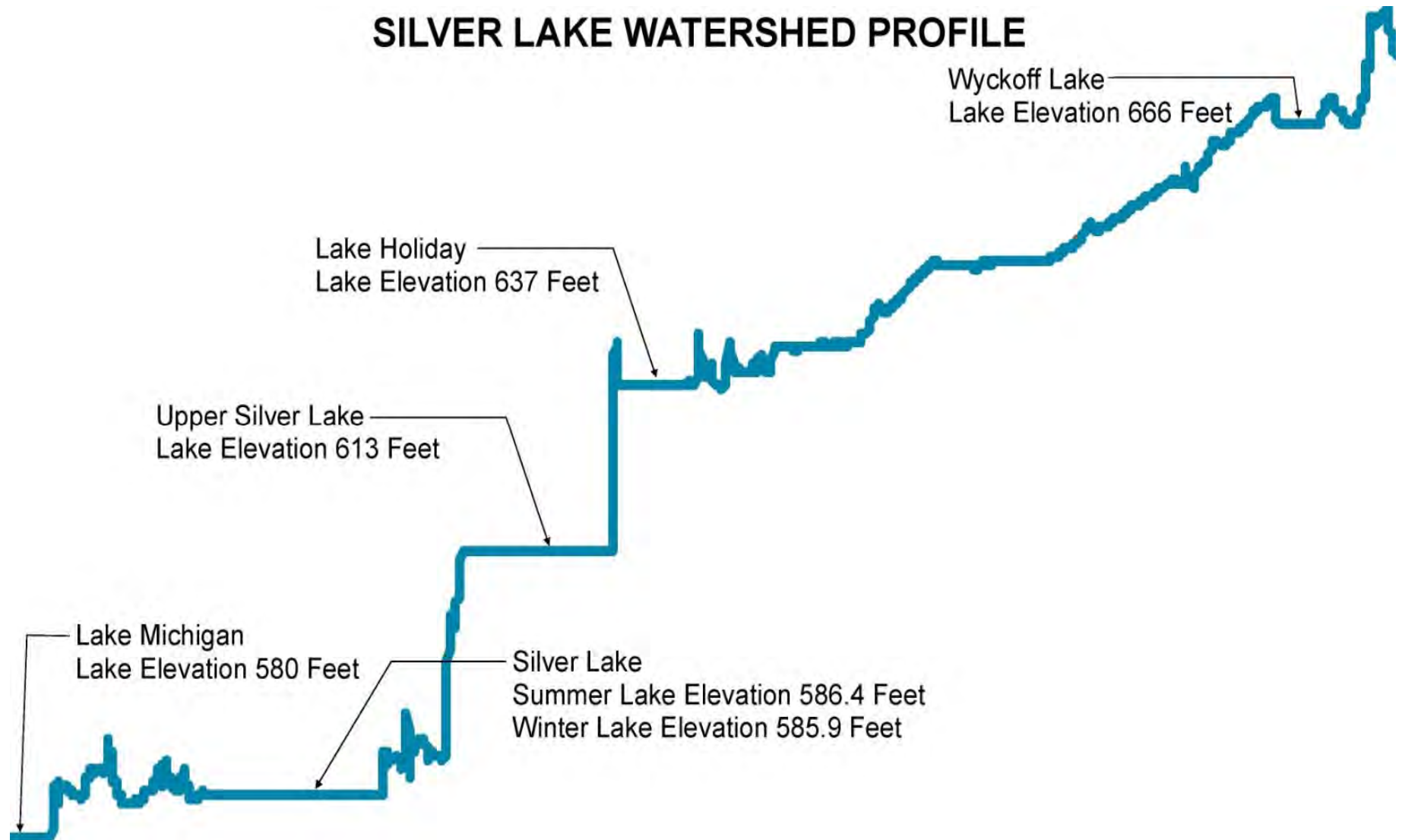


Water Features Map





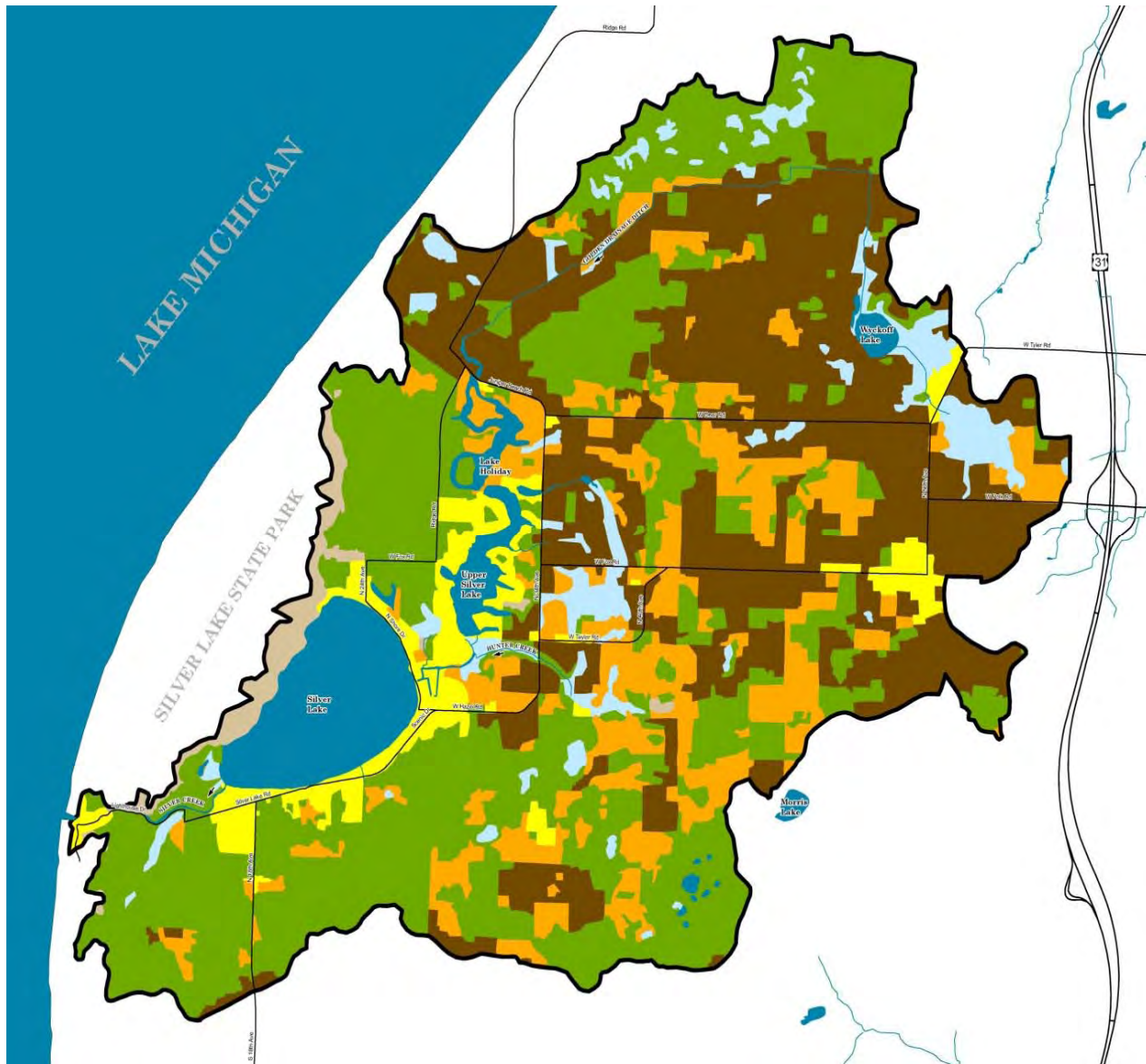
SILVER LAKE WATERSHED PROFILE



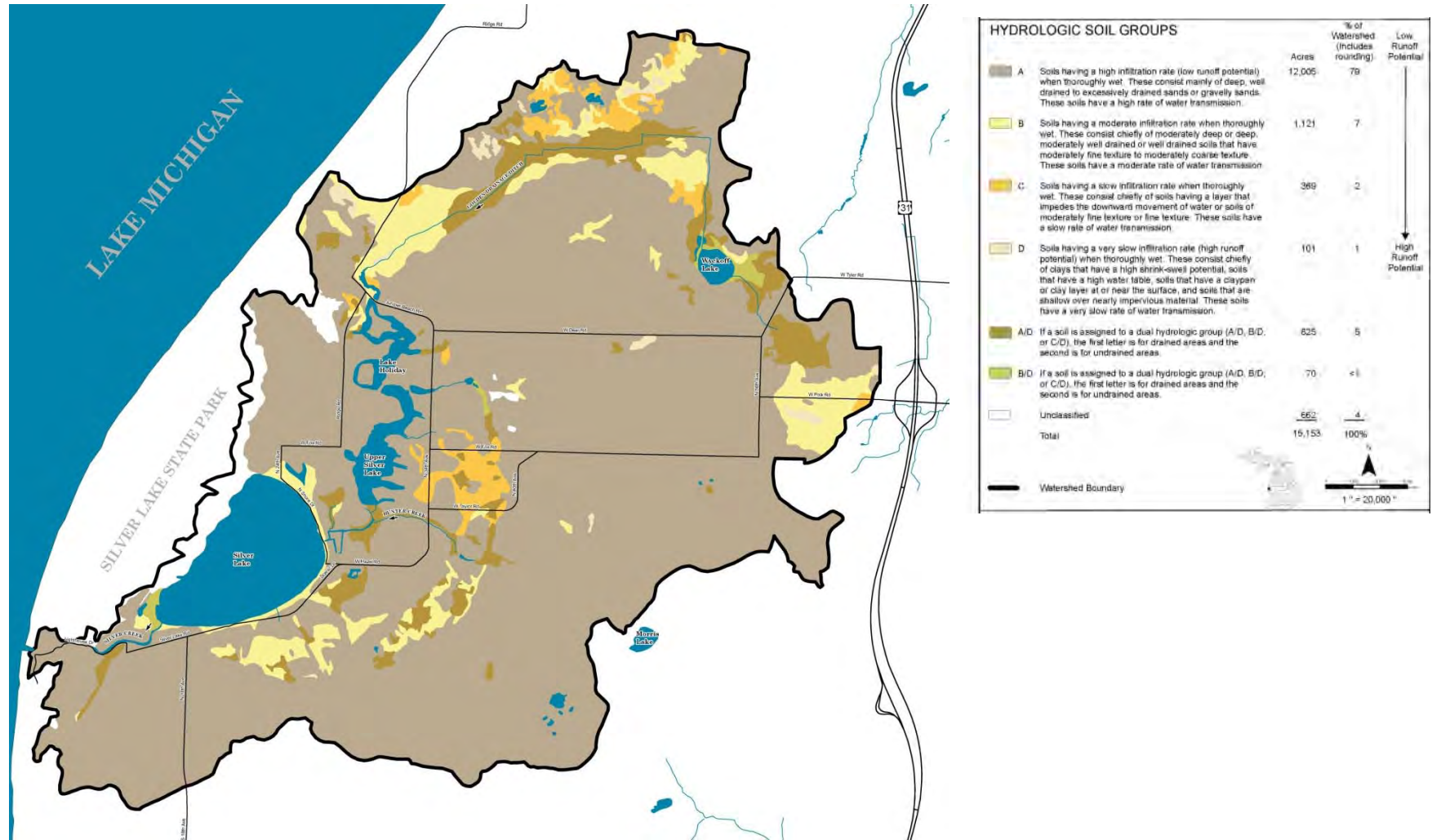
Silver Lake Watershed



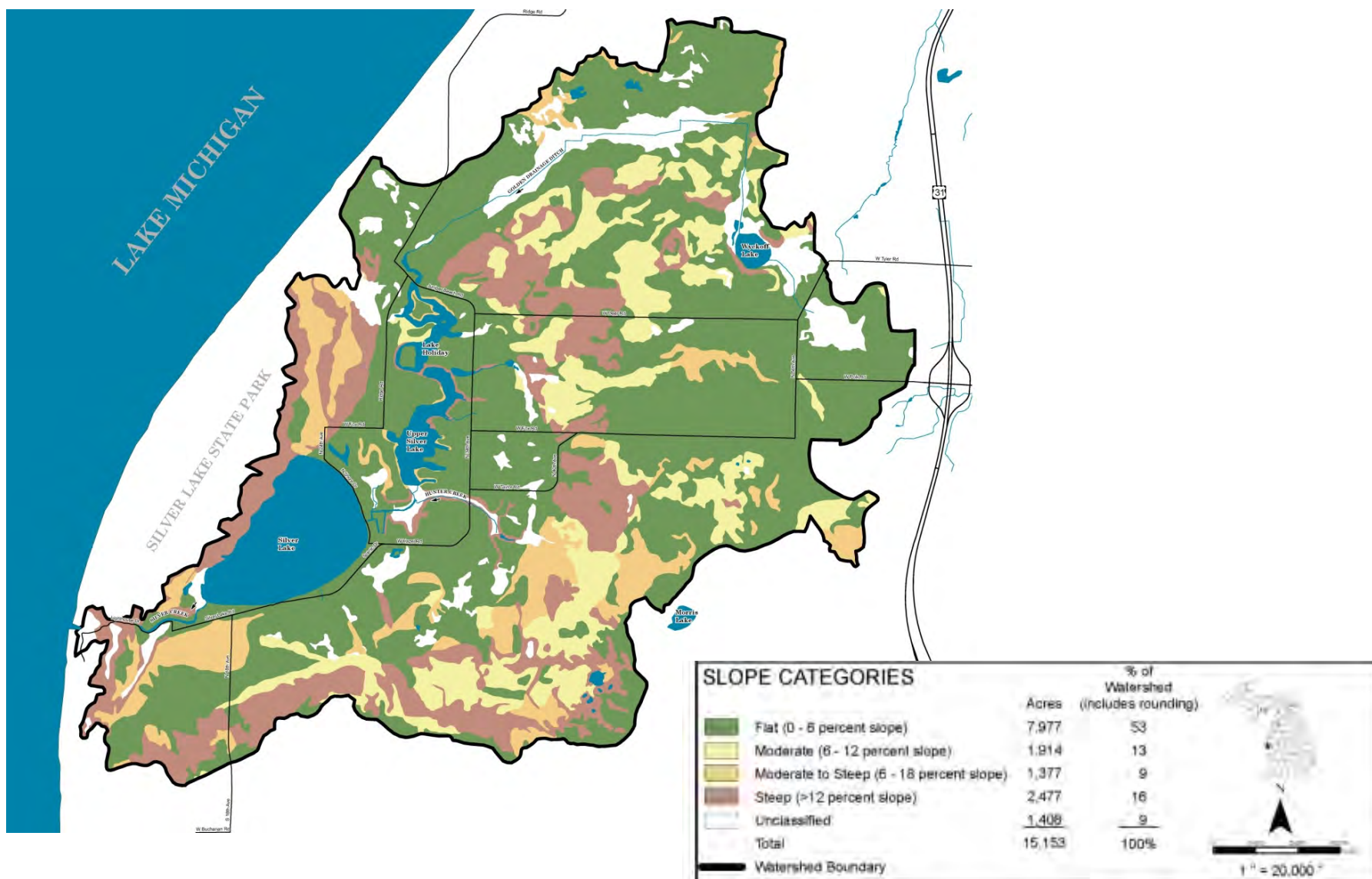
Watershed Land Use



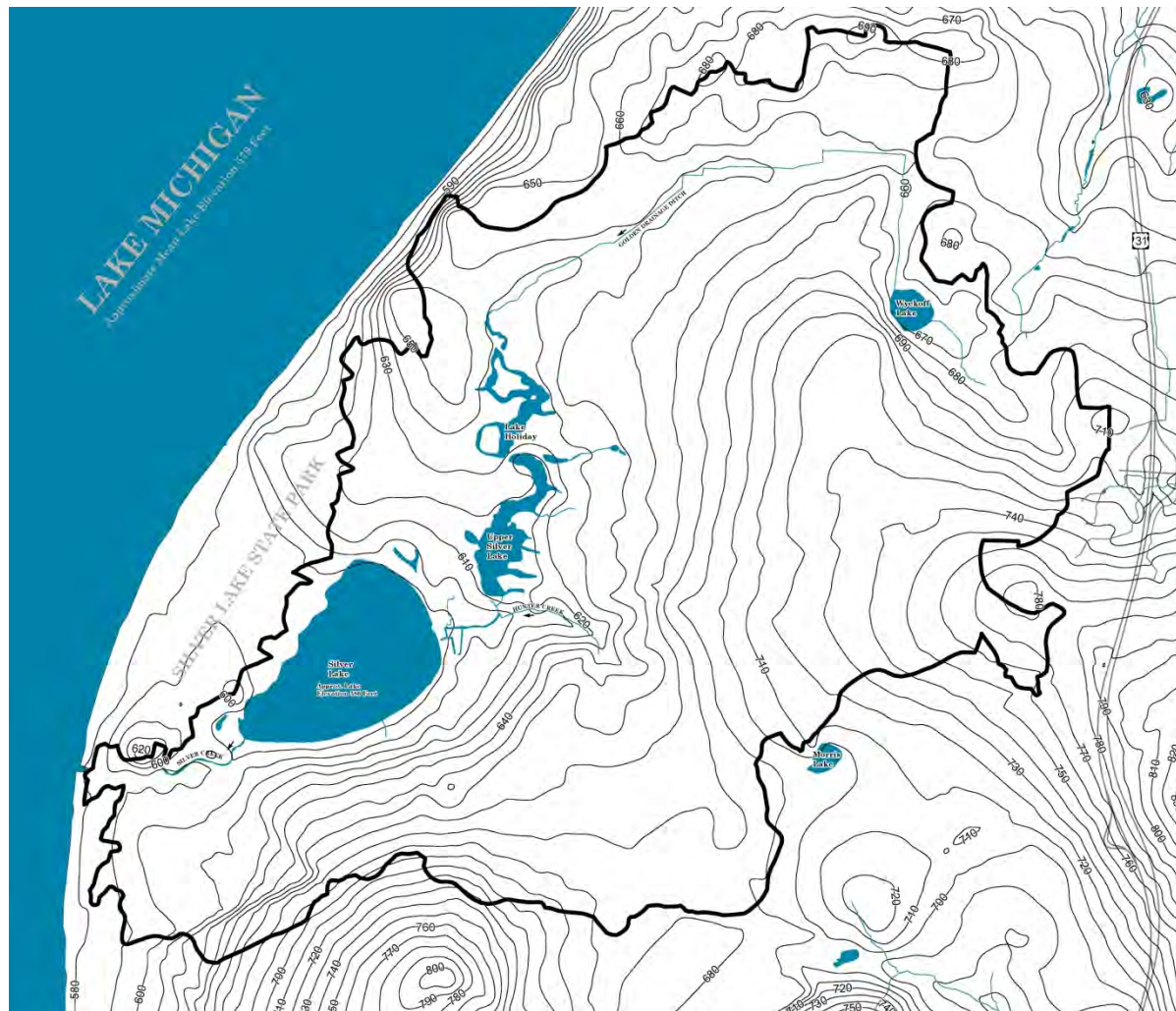
Hydrologic Soils



Slope Map



Groundwater Contours



USGS Sampling Locations



Findings

- Dune migration has not significantly altered the physical characteristics of Silver Lake.
- Watershed data will supplement the ongoing study being conducted by USGS and GVSU.

