

Firm Overview

Company Facts

- Established 1981
- Headquartered in Milwaukee
- 260 Employees
- 52 Professional Engineers
- 12 Licensed Surveyors
- **The Milwaukee Business Journal Best Places to Work**
- **Journal Sentinel Top Workplace**
- **Daily Reporter Top Projects**
- **ENR Top 500**
- **POB Top 100**
- **Zweig Group Hot Firms List**

FIRM OVERVIEW

Kapur & Associates, Inc. is a multi-discipline engineering firm established in 1981. Currently, we employ about 260 professionals who are all part of an Employee Stock Ownership Program (ESOP). This organizational structure empowers everyone to take a proactive approach that leads to a strong sense of pride in the success of our clients' projects.

Mission & Vision

Our mission at Kapur is to develop a close, professional and honest relationship with our clients that enables us to fully understand their needs and expectations and allows us to provide quality services that exceed their definition of success. We're passionately committed to delivering infrastructure, protecting the environment, designing meaningful projects, cultivating relationships, and connecting to the community.

Comprehensive Services

Kapur has become a trusted business partner and leader in the industry by providing exceptional expertise and technical knowledge

across every phase of a project. The individual and collective efforts of our personnel provide cost-effective sustainable solutions in a timely manner.

- **Transportation Engineering**
 - Highway design
 - Local street design
 - Lighting
 - Traffic analysis
 - Planning
 - Construction staging
- **Structural Engineering**
 - Bridges
 - Sign structures
 - Retaining and noise walls
 - Buildings
- **Public Relations**
 - Public meetings
 - Community advisory committees
 - Property owner interviews
- **Municipal Engineering**
 - Capital improvement planning
 - Grant writing
 - Stormwater management
 - Water main design
 - Storm and sewer design
- **Surveying**
 - Topography
 - Platting, easements, ALTA survey
 - 3D modeling/scanning/UAV
 - Construction layout and staking
- **Utility Distribution**
 - Electrical distribution and transmission
 - Gas pipeline and system design
 - GPS inspection/GIS as-built
- **GIS Mapping**
 - Project website
 - As-built additions
 - Record management
- **Construction Management**
 - Manage schedule/budget
 - Construction oversight
 - GPS inspection/GIS as-built
- **Site Design**
 - Stormwater management
 - Planning
 - Review
- **Landscape Architecture**
 - Bioretention and ponds
 - Park planning
 - Plan review
- **Environmental**
 - Hazardous materials Investigation
 - Site assessment and remediation
 - Environmental oversight
- **Natural Resources**
 - Natural resource permitting
 - Erosion control and protection
 - Stream relocation/naturalization
 - Wetland delineation
 - Ordinary high-water mark
 - Flood map revisions
- **Water Services**
 - Water system design
 - Well design
 - Tank/reservoir design

All data was obtained on 7/18/19 between the hours of 8:30am to 12pm (3 ½ hours)

Average water elevation (6 locations observed) = 932.50'

Average Water mark elevation (6 locations observed) = 932.01'

DNR Warden suggested setting the no wake elevation slightly above OHWM 2" to 3" above.

Another Recommendation to consider would be 1" above.

Next Steps: Waiting to receive authorization on what elevation is agreed upon to be used for the No Wake limit.

A mettle/ Aluminum bar would be set with a drilled hole/ mark to the No Wake elevation that will go into ordinance.

No Wake line elevation 1" above average = 932.09'

No Wake line elevation 2" above average = 932.17

No Wake line elevation 3" above average = 932.26

We installed a 1" to 2" wide by 2' long piece of steel to mount on the concrete at the boat launch for making the elevation line readings, this was mounted with Tap-con screws to prevent tampering. (See included pictures) "0" was set at elevation 932.01.

Survey Units vs Architectual (Inches)

0.08 = 1"

0.16 = 2"

0.25 = 3"

0.33 = 4"

0.42 = 5"

0.50 = 6"

Elevation data is referenced to NGVD '29 datum and tied to County BM 61521 located at the SE corner of Cth C and Cth P (West of the lake)

Lake Statistics

+/- 125 Acres

+/- 5,460,743 SqFt

Max Depth per DNR lake details 61'

Mean Depth of lake is 20'

Eastern lake Basin is deepest 61', with the Western being about 30'





People involved in project work.

Kathryn M. McNelly Bell

Associate/ natural Resources Department Manager

18 years of natural resource consulting

- International Erosion Control Association Certified Professional in Erosion and Sediment Control
- Wisconsin Erosion Control Inspector
- Wisconsin Wetlands Association
- United States Army Corps of Engineers (ACOE) Wetland Delineation Certification

Jason L. Herther

Associate/ Survey Project Manager

18 years of Survey Experience

- Project Control/ Networks
- **Data Collection and Management**
- **Base Mapping Topographic Data**
- **Management of Utility Teams**
- **Quality Assurance/Quality Control**
- **Client Liaison**

James Fritz

Survey Crew Chief

16 years of Survey Experience

- Project Control
- Data Collection and Management
- Base Mapping Topographic Data
- LiDAR and Photogrammetry









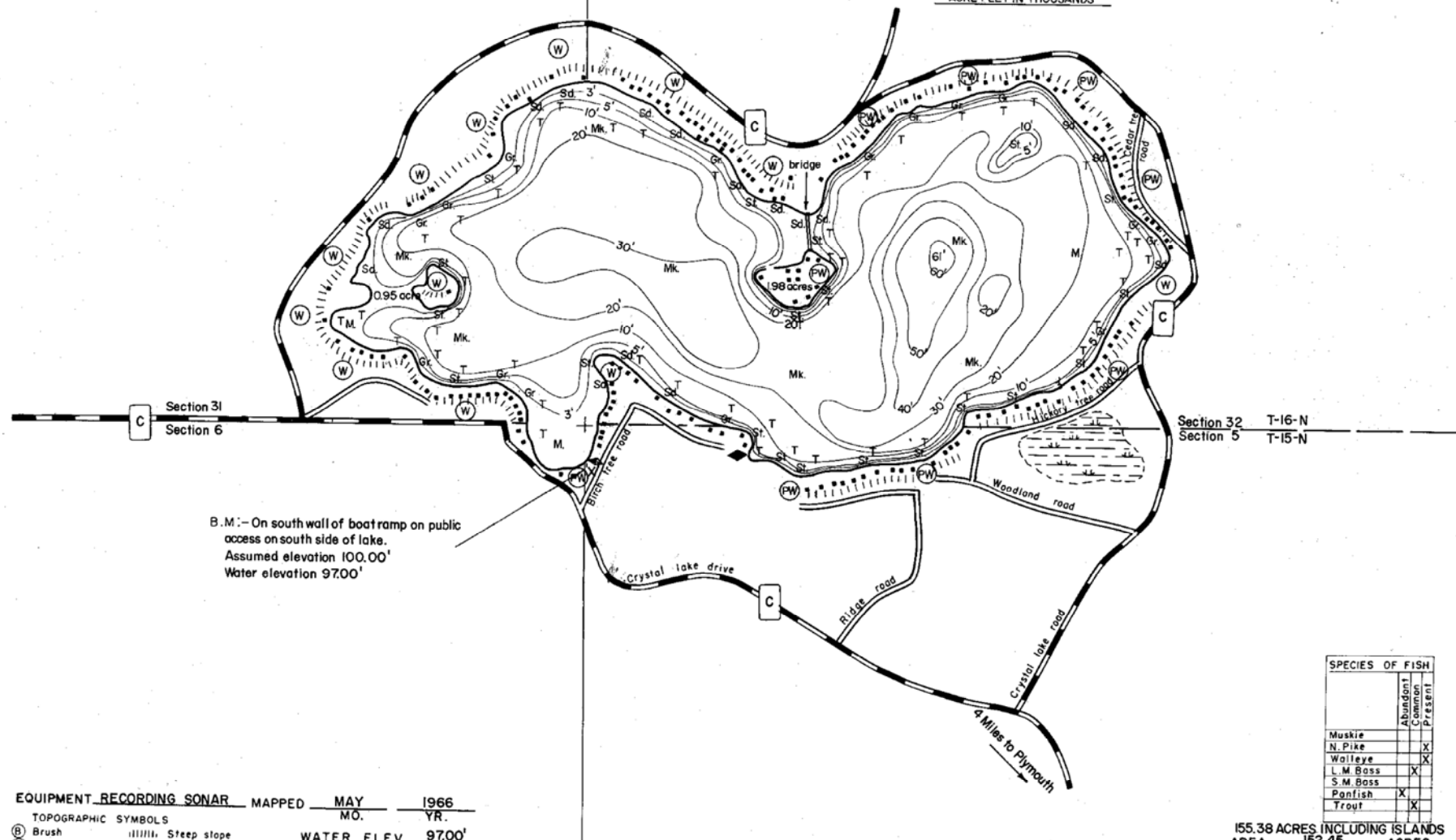
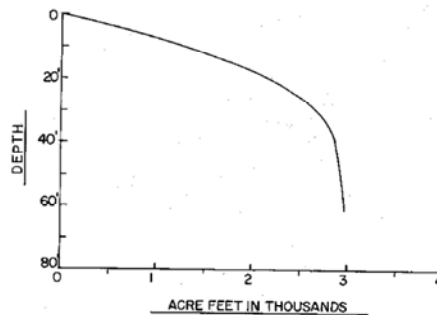
LAKE SURVEY MAP

CRYSTAL
LAKE

SHEBOYGAN
COUNTY

SEC. 5,6,31,32 T. 15,16- N. R. 21- E.

N



EQUIPMENT RECORDING SONAR MAPPED MAY 1966
MO. YR.

TOPOGRAPHIC SYMBOLS

- (B) Brush
- (PW) Partially wooded
- (W) Wooded
- (C) Cleared
- (P) Pastured
- (A) Agricultural
- B.M. Bench Mark
- Dwelling
- Resort

WATER ELEV. 97.00'

LAKE BOTTOM SYMBOLS

- P. Peat
- Gr. Gravel
- St. Stumps & Snags
- Mk. Muck
- R. Rubble
- C. Clay
- Br. Bedrock
- M. Marl
- T. Submergent vegetation
- Sd. Sand
- 1. Emergent vegetation
- St. Silt
- F. Floating vegetation



◇ Access ◇ Access with Parking ◇ Boat Livery

Field work by: H. Schmude, T. Corbett, G. Werdin Drawn by: J. Roth

SPECIES OF FISH		
	Abundant	Present
Muskie		
N. Pike		X
Walleye		X
L. M. Bass	X	
S. M. Bass	X	
Panfish	X	
Trout	X	

155.38 ACRES INCLUDING ISLANDS
AREA 152.45 ACRES
UNDER 3 FT. 11 %
OVER 20 FT. 47 %
VOLUME 2966.66 ACRE FT.
TOTAL ALK. 164 P.P.M.
SHORELINE 2.6 MILES
MAX. DEPTH 61 FEET

Source: Wisconsin Department of Natural Resources 608-266-2621
Crystal Lake – Sheboygan County, Wisconsin DNR Lake Map
Date – May 1966 - Historical Lake Map - Not for Navigation
A Public Document - Please Identify the Source when using it.