

LAKE PHYSICAL DESCRIPTION form, R-8057 (reduced to fit on this page).

**MICHIGAN DEPARTMENT OF NATURAL RESOURCES**  
**Fisheries Division**

R8057  
Rev. 3/82

Lake \_\_\_\_\_ T. \_\_\_\_\_ R. \_\_\_\_\_ Sec. \_\_\_\_\_ **LAKE PHYSICAL DESCRIPTION**  
 County \_\_\_\_\_  
 Id. \_\_\_\_\_ Prepared by \_\_\_\_\_ Date \_\_\_\_\_

1. Lake: Area (ha) \_\_\_\_\_ Perimeter (km) \_\_\_\_\_ Shape factor  $\downarrow$  \_\_\_\_\_ Ref. \_\_\_\_\_
2. Watershed: Area (km<sup>2</sup>) \_\_\_\_\_ Perimeter (km) \_\_\_\_\_ Shape factor  $\downarrow$  \_\_\_\_\_ Lake area  $\div$  watershed area \_\_\_\_\_ Ref. \_\_\_\_\_
3. Maximum depth (m) \_\_\_\_\_ Mean depth (m) \_\_\_\_\_ Volume (1000's of m<sup>3</sup>) \_\_\_\_\_ Ref. \_\_\_\_\_
4. Heating degree days (base 55°F) \_\_\_\_\_
5. Flushing rate (years) \_\_\_\_\_ Ref. \_\_\_\_\_
6. Drainage type (✓): Seepage \_\_\_\_\_ Intermittent outlet \_\_\_\_\_ Permanent outlet \_\_\_\_\_
7. Inlets: Names \_\_\_\_\_  
 Mean annual discharge (m<sup>3</sup>/sec) \_\_\_\_\_ Ref. \_\_\_\_\_
8. Outlet: Name \_\_\_\_\_  
 Mean annual discharge (m<sup>3</sup>/sec) \_\_\_\_\_  
 Name of main drainage system \_\_\_\_\_
9. Lake type (✓): Natural \_\_\_\_\_ Natural with dam \_\_\_\_\_ Impoundment \_\_\_\_\_
10. Dam: Height (m) \_\_\_\_\_ Boat lock (✓): No \_\_\_\_\_ Yes \_\_\_\_\_ Functional fish ladder (✓): No \_\_\_\_\_ Yes \_\_\_\_\_  
 Effect on upstream fish movement (✓): None \_\_\_\_\_ Hinders \_\_\_\_\_ Completely blocks \_\_\_\_\_  
 Comments: \_\_\_\_\_
11. Annual fluctuation in water level (✓): 0-0.5m \_\_\_\_\_ 0.5-1m \_\_\_\_\_ 1-2m \_\_\_\_\_ more than 2m \_\_\_\_\_
12. Maximum long-term fluctuation in water level (m) \_\_\_\_\_
13. Soils in 0-2m (%): Organic \_\_\_\_\_ Muck \_\_\_\_\_ Clay \_\_\_\_\_ Marl \_\_\_\_\_ Sand \_\_\_\_\_ Gravel \_\_\_\_\_ Rubble \_\_\_\_\_ Bedrock \_\_\_\_\_
14. Soils in 2m+, (%): Organic \_\_\_\_\_ Muck \_\_\_\_\_ Clay \_\_\_\_\_ Marl \_\_\_\_\_ Sand \_\_\_\_\_ Gravel \_\_\_\_\_ Rubble \_\_\_\_\_ Bedrock \_\_\_\_\_
15. Shoreline (% by type): Bog \_\_\_\_\_ Swamp \_\_\_\_\_ Marsh \_\_\_\_\_ Upland \_\_\_\_\_
16. Lake use (✓): Private \_\_\_\_\_ Semiprivate \_\_\_\_\_ Public \_\_\_\_\_
17. Approximate number of: Cottages and houses \_\_\_\_\_ Resorts \_\_\_\_\_ Boat liveryes \_\_\_\_\_
18. Surrounding land use (%): Undeveloped \_\_\_\_\_ Agricultural \_\_\_\_\_ Urban \_\_\_\_\_
19. Describe topography, soil, vegetation: \_\_\_\_\_

$\downarrow$ Shape factor formerly called shore development factor. Equals perimeter  $\div$  3.5449  $\sqrt{\text{area}}$ .

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References for items 1, 2, 3, 5, 7, 8

Ref. code:

1. Marsh, William M. and Thomas E. Borton. 1974. Michigan Inland Lakes and their Watersheds (an atlas). Michigan Dept. Natural Resources, Water Resources Comm., 166p. (Data for lakes larger than 100 acres. Based on USGS topographic maps and may be in error if shoreline alteration has taken place since mapping.)
2. Fisheries Division lake maps (cite date of mapping).
3. Miller, J. B. and T. Thompson, 1970. Compilation of data for Michigan lakes. U.S. Dept. Interior Geol. Surv., in cooperation with Mich. Dept. Nat. Resources.
4. Anonymous. 1975. A compendium of lake and reservoir data collected by the National Eutrophication Survey in the Northeast and North-central United States. U.S. Environ. Protection Agency, National Eutrophication Survey Working Paper No. 474.
5. Humphys, C. R. and R. F. Green. 1962. Michigan lake inventory bulletins 1-83. Mich. State Univ., Dept. Resource Devel., East Lansing, Michigan.
6. Fisheries Division files (e.g., lake volume analysis).
7. Land Resource Programs files.
8. Water Management Division files.
9. Water Quality Division files.
10. U. S. Forest Service files.
11. Derived by the preparer of this form.  
 Other publications and sources (number and cite below). (e.g., P. W. Laarman, Fisheries Research, has estimated many mean depths.)

Reference for item 4

Van Den Brink, C., N. D. Strommen, and A. L. Kenworthy. 1971. Growing degree days in Michigan. Mich. State Univ. Agr. Exp. Sta., Res. Rep. No. 131, 48 p.

Continuations (use item numbers):