

Lake Management Plan for Muskellunge Lake, Vilas County Wisconsin

Table of Contents

	page number
1. Introduction and Project Setting	1
2. Glaciers and soils	2
3. Watershed Features	4
3.1. Drainage area and land use of Muskellunge Lake	4
3.2. Source of water and nutrients to Muskellunge Lake	6
3.3. Shoreland inventory	7
3.4. Muskellunge Lake wildlife inventory	12
3.5. Groundwater and on-site wastewater treatment systems	13
4. Lake Features	15
4.1. Lake map and lake statistics	15
4.2. Dissolved oxygen and temperature	17
4.3. Lake water quality summary	19
4.3.1. Secchi disc transparency	23
4.3.2. Total phosphorus	24
4.3.3. Chlorophyll <u>a</u>	25
4.4. Algae	26
4.5. Zooplankton	27
4.6. Aquatic plant status	29
4.7. Fishery status	43
5. Lake and Watershed Assessment	44
5.1. Lake questionnaire results	44
5.2. Muskellunge Lake status	50
5.3. Nutrient inputs to Muskellunge Lake	52
5.4. Setting water quality goals for Muskellunge Lake	53
5.5. Significant findings and water quality strategy	56
6. Lake Project Ideas for Protecting the Lake Environment	57
1. Watershed projects	58
2. On-site system maintenance	58
3. Aquascaping projects	59
4. Aquatic plant projects	64
5. Fish management options	67
6. Sediment alum treatment for water quality improvement	68
7. Ongoing education program	70
8. Watershed and lake monitoring program	71
References	72
Appendix	