

public perceptions of the
impacts, use, and future
of minnesota lakes

results of the 1998
minnesota lakes survey

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executive summary



EXECUTIVE SUMMARY

INTRODUCTION

Lakes are one of the hallmark resources of the State of Minnesota. Minnesotans enjoy lakes for many reasons, including recreation, scenery, solitude, and homes. All of these uses combine to create pressures on lake resources. With lakeshore development comes impacts, and these impacts are especially evident if development is poorly managed. Impacts are apparent as changes in water quality and aesthetics, and in aquatic and riparian habitat.

The University of Minnesota Sea Grant Program and the Minnesota Department of Natural Resources designed a survey to learn about the public's perceptions of the condition of Minnesota lakes. Lakes are a public resource, owned in common by all Minnesotans. As such, Minnesotans play a central role in setting the future direction for "their" lakes. This survey offered Minnesotans an opportunity to provide input into public policy discussions about the future management of lake resources. Management programs require public support to be successful. One way to gather that support is to ensure the public has opportunities to affect the design and implementation of the management programs.

LAKE IMPORTANCE

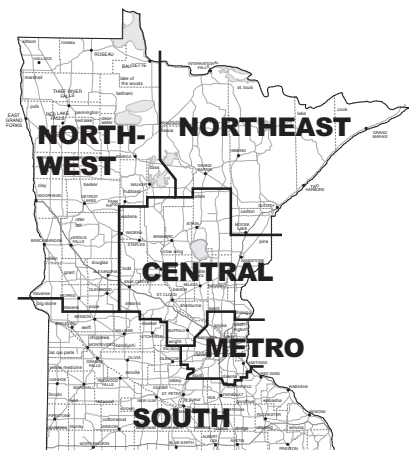
Lakes, and other natural resources, can be valued in a wide variety of ways, including ways related to the current use of the resource for outdoor recreation, aesthetics, ecological (life support) functions, and contributions to local economies. They can also be valued for their future uses, and for their existence, irrespective of uses. Survey responses indicate that a majority of the Minnesota population, including those who do not use lakes, value lakes in each of these ways.

That lakes are seen as important in many different ways by large portions of the population is the major reason lake management is so complicated and difficult. Unless all of these values are addressed together in a comprehensive fashion, management plans will likely be opposed by a large number of people who feel their values are being ignored.

LAKE USE

Most Minnesotans (77%) who responded to the survey used lakes at least one time in the last year for "any on-water activity like fishing, boating or any other activity that is enhanced by the presence of lakes, such as camping, sightseeing, or living in a shoreland home." Of those who use lakes, the median number of days of use per year is 20 and the mean is 55.

When asked in what region they use lakes the most, the central region came out on top (26% of lake users), followed by the



metro region (23%) , south region (21%), northwest region (16%), and northeast region (14%).

The leading reason for selecting the most-used lake has to do with convenience (‘close to home’). Other reasons reported by over 40 percent of lake users include ‘scenic,’ ‘good fishing,’ ‘quiet’ and tradition (‘have gone for years’).

The top-ranked activity categories are—in declining order—fishing, socializing, appreciating aesthetics/nature, non-fishing boating, and swimming. If non-fishing boating is combined with fishing from boats, the general category ‘boating’ would be the highest-ranked activity category.

STATUS AND TRENDS OF LAKE CONDITIONS

Minnesota lake users were asked their perceptions of conditions and trends of the lake they use most and, presumably, with which they are the most familiar. The survey made every attempt to tap into lake users’ history of direct experience, and have them evaluate the lakes they know well. Specifically, lake users were asked about 18 lake and shoreland characteristics, which were developed for four theme areas: overall conditions; water recreation; fish, wildlife and other aquatic resources; and shoreland conditions.

When analyzing responses to these 18 lake and shoreland characteristics, a general pattern emerged. Most lake users judge current conditions as being pretty good (but not ‘excellent’) on their highest-use lake, and judge the trend in conditions as ‘remained about the same’ or little change. When they note a change, more users indicate a trend to poorer conditions than to better conditions. In addition, examining responses by region of use and riparian property ownership leads to only a small number of differences that are noteworthy.

An example illustrates this general pattern of responses. Lake users mainly give positive ratings (70% ‘good’ to ‘excellent’) to the current overall condition of the lake they use most often (see table). Very few give clearly negative ratings (3% ‘poor’). Ratings are higher for users of the northern regions, especially the northeast region, where 80 percent of users give positive ratings. Riparian property owners perceive current conditions about the same as lake users who do not own shoreland.

Overall condition of lake and shoreland areas of most-used lake			
Current condition	Percent of Responses	Trend	Percent of Responses
Excellent	6	Improved	12
Good	64	Remained about the same	63
Fair	26	Worsened	21
Poor	3		
Don't know	2	Don't know	5
Total percent	100	Total percent	100

Since beginning their history on their most-used lake, nearly two-thirds of lake users (63%) have experienced little change (‘remained about the same’) (see table). For those who reported a trend, more reported worsening conditions (21%) than improving conditions (12%). Differences in trend responses by region of use are not large. Riparian property owners are more likely to report worsened conditions (32%) than other lake users.

OUTLOOK FOR LAKES

The outlook of lake users on water quality and scenic beauty has a lot in common with their perception of recent trends. In their outlooks—as with their perceptions of recent trends—the largest group of lake users expects conditions to remain the same. For lake users who expect conditions to change, more expect conditions to ‘worsen’ than ‘improve.’ The outlooks are a little more optimistic than perceptions of recent history, as judged by the gap between ‘worsen’ and ‘improve’ responses.

Few regional distinctions are worth noting for water quality history or outlook, or for scenic beauty history or outlook. Lake users who owned riparian property have views similar to other lake users.

IMPACTS ON LAKE WATER QUALITY AND SCENIC BEAUTY

Lake users were asked to identify the major factors that contribute to changes in water and scenic quality on the lakes they use most. The leading factors associated with worsening water quality are runoff from lawns, fields, and urban surfaces. Septic systems and exotic species are also leading factors. Exhaust and fuel leakage from motorized watercraft is frequently identified as having at least a ‘moderate impact,’ but is less frequently identified as having a ‘great’ impact. Far down on the list of frequent impact identifications are wastewater discharges from commercial, industrial or municipal sources, and vegetation removal (shoreline, aquatic plant and timber harvest).

Lake users who own riparian property are in agreement with other lake users on the impacts associated with declining water quality. Regionally, however, there is much less consensus among lake users, mainly because the landscapes are so different. In agricultural regions (northwest and especially the south), agricultural factors become more important. In the metro region, urban factors are more important, and on-site septic systems (not that common in the metro region) are less important. Exotic species rank high in the metro region. In the northeast, central and northwest, which have high numbers of shoreland homes, septic systems are the leading factor. In the northeast, timber harvesting becomes a top-ranked factor.

In contrast to water quality, the ranking of factors associated with declining scenic quality is more widely shared among regions. There is also agreement between lake users who own riparian property and those who do not. The top factor—identified by those 25 percent of lake users who perceived a decline in scenic quality on the lake they use most—is clearly shoreland home construction. Over half identified cabin or home development as having a ‘great’ impact on declining scenic quality. Next in importance are other types of shoreland development: installation of large shoreline structures (such as docks and boat lifts) and road construction near shore. Vegetation (tree and shrub) removal in shoreland areas is the third most frequently mentioned factor impacting scenic quality. Commercial and industrial developments, including resorts and marinas, are not frequently identified as having major impacts.

POSSIBLE SOLUTIONS TO LAKE PROBLEMS

Lake users were asked whether they support or oppose each of 17 solutions to address problems on their most-used lake. The 17 solutions were selected to represent four broad categories of solutions: education, management, regulation/enforcement, and incentives.

In general, there is much statewide support (most above 50%) and little opposition (most below 10%) for proposed solutions regarding lakes in Minnesota. None of the four categories of solutions (education, management, regulation/enforcement, and incentives) appears to be clearly preferable in the public's mind. The finding that regulatory solutions receive about the same level of support as the other categories is consistent with another finding in the survey. Lake users did not feel that the current regulatory environment for lakes and lakeshore is overly restrictive. Few (10%) feel that laws and regulations have 'gone too far.' By far most either feel the current situation is 'about right' or that laws and regulations have 'not gone far enough.' These views of the current regulatory environment are shared widely by riparian property owners and across the state.

Support for specific regulatory solutions—from top to bottom—is: stricter controls for exotic species (72% supporting), stricter septic system regulations to improve water quality (68%), motorboat size and speed limits (66%), more enforcement of existing shoreland protection laws (60%), stricter zoning regulations for shoreline development to maintain natural shoreline character (58%), stricter regulations to protect shoreland trees and shrubs (57%), and increasing minimum lot size requirements (35%).

There is much support for educational programs that address shoreline property owners (79% supporting) and farmers (69%) about their potential impacts on water quality. A majority also supports more educational programs targeting loggers and foresters (54%).

Management techniques are well supported statewide, although support varied depending upon the technique. Increased protection for fish habitat had the largest degree of support (68% supporting). More management for game populations (48%) and more public land purchases (47%) had lower levels of support.

For solutions involving incentive programs, a majority (53% to 61%) of all lake users support: awards programs for shoreland property owners who minimize their impacts, development of financial incentives for environmentally-sound shoreland management, and more erosion control assistance for property owners.

Regionally, there are no significant differences in support or opposition for solutions, except for in the northeast, where users are slightly more opposed to some of the regulatory and management solutions. Riparian property owners have significantly less support for more public land purchases to protect shoreland areas than other lake users. Riparian property owners also differed, to a lesser degree, on support and opposition to three regulatory and one incentive solution.

