

2002 Lake Minnetonka Shoreline Storage Count

INTRODUCTION

The Management Plan for Lake Minnetonka, adopted in December of 1991, has established Lake Use Objectives for Lake Minnetonka. Beginning in 1992, and every other year thereafter, one of these objectives is to measure watercraft density and the distribution of beached and rafting watercraft on Lake Minnetonka. In compliance with this objective, Lake Minnetonka Conservation District (LMCD) staff has conducted a Shoreline Storage Count for watercraft stored on Lake Minnetonka in 2002.

Three primary objectives were established for the 2002 Shoreline Storage Count. They include:

1. Establish the total number of watercraft stored in 2002.
2. Outline data collected from historical Shoreline Storage Counts.
3. Identify any observable conclusions and trends from the Shoreline Storage data collected.

METHODOLOGY

To ensure consistency and accuracy in the 2002 Shoreline Storage Count, LMCD staff established parameters in which the storage inventory was to be conducted. Detailed below is a summary of these parameters.

1. Survey all 125 miles of lakeshore frontage on Mondays through Thursdays, between the hours of 7:30 AM and 12:00 PM. This time has been selected to best represent when observers could count the maximum number of watercraft stored on Lake Minnetonka. Friday was established to be an alternative day when weather conditions were not favorable.
2. In previous seasons, the count was conducted during the month of June with a completion date prior to July 4. In 2002, the count began on July 25 and ended August 29. Although this part of the methodology changed, staff believes this had little or no impact on the outcome of the study.
3. The watercraft count was to be conducted by LMCD staff from the 18 foot runabout owned by the LMCD.
4. A shoreline storage count worksheet was established to assist in conducting the shoreline storage inventory. Ten classifications of watercrafts were established on this worksheet to categorize each watercraft type. These watercraft classifications include: runabout, cruiser, sailboat, pontoon, houseboat, charterboat, fishing boat, personal watercraft (PWC), aircraft, and miscellaneous. Further definition of these watercraft classifications are defined in Appendix A.
5. Residences that had docks with 3 boats, 4 boats, and empty slips were also identified in 2002. In this Report, a slip was defined as either a docking structure with three clearly defined sides or a boat lift. The statistics accumulated for this category were for residences storing restricted watercraft, not unrestricted watercraft.

SUMMARY OF THE 2002 SHORELINE STORAGE COUNT

The total number of watercraft stored, beached or rafting on Lake Minnetonka for 2002 was 10,509. Appendix B highlights this figure and provides a breakdown, by watercraft classification and bay. Further analysis indicates that 6,906 watercraft were stored at riparian residences and that 3,603 watercraft were stored at multiple dock facilities. Results indicate that nearly 57% of the watercraft counted on Lake Minnetonka were either found in the runabout or cruiser classification. The lowest percent of watercraft stored on the lake were classified in the houseboat, charter boat and aircraft classifications with less than 1%.

Appendix B highlights the 6,906 watercraft stored at riparian residences in 2002. Approximately 56% of the watercraft stored on riparian shoreline were found to be in either the runabout or cruiser classification. Further breakdown of this figure indicates that 25% of the watercraft inventoried were runabouts and that 31% were cruisers. The lowest percent of watercraft stored at riparian residences were found to be in the houseboat, charter boat, and aircraft classifications, which total less than 1%. These percentages are slightly skewed because LMCD staff was unable to distinguish the watercraft counted, by classification, at riparian residences because of the Mound Commons Docking Program. Further details of this drawback are discussed later in the text.

Appendix C highlights the 3,603 watercraft stored at multiple docks in 2002. Approximately 59% of watercraft stored at multiple docks were found to be in the runabout and cruiser classification. Further breakdown of this figure indicates that 31% of the watercraft were runabouts and that 28% were cruisers. The lowest percentage of watercraft stored at multiple docks were houseboat, charter boat, and aircraft classifications, which total less than 1%. Again, these percentages are slightly skewed because District staff was unable to distinguish the watercraft counted, by classification, at multiple dock facilities because of the Mound Commons Docking Program. The City of Mound indicated to District staff that 564 watercraft, on nine bays, were located at the Mound Commons Docks in 2002. These bays are highlighted by an (*) in Appendix B and C. Further breakdown of these watercraft are detailed below:

• Priests Bay	32
• Cooks Bay	63
• Phelps Bay	119
• Black Lake	88
• Emerald Lake	5
• Seton Lake	29
• Harrisons Bay	165
• Jennings Bay	24
• West Arm	39
TOTAL	564

Because this documentation was provided by the City of Mound, the Report is accurate with regards to total riparian and multiple dock watercraft inventoried in 2002. The drawback is that these 564 watercraft were not broken down by watercraft classification by the City of Mound. The end result is that these 564 watercraft are documented in the riparian storage classification count rather than the multiple dock storage classification count.

Appendix D highlights residences that had docks with 3 watercraft, 4 watercraft, and empty slips. In 2002, there were 401 residences that had 3 watercraft stored at the dock, there were 238 residences that had 4 watercraft stored at the dock, and there were 476 empty slips capable of storing watercraft. The 3 boat, 4 boat, and empty slip categories in 2002 represented storage of restricted watercraft. These categories have increased from 2000 when there were 355 residences that had 3 restricted watercraft stored at a dock, 186 residences that had 4 restricted watercraft stored at a dock, and 254 residences with empty slips capable of storing a restricted watercraft.

SUMMARY OF HISTORICAL SHORELINE COUNTS

Appendix E highlights historical shoreline counts conducted by the LMCD from 1971 to 2002. The 10,509 watercraft documented in the 2002 study set a historical high, breaking the previous high of 10,475 in 1996. It should be pointed out that the shoreline inventory conducted in 1996 was an aerial survey conducted by Clear Air, Inc. This differs from the most recent surveys, including 2002, that have been conducted by LMCD staff from the LMCD runabout. Additional factors contributing to this increase in 2002 will be discussed later in the text under "Conclusions/Trends".

TRENDS

Based on the data collected from the 2002 Lake Minnetonka Shoreline Storage Count, LMCD staff believes that conclusions and trends can be further evaluated into three separate categories. They include analyzing overall watercraft storage, analyzing 3 Boat/4 Boat storage, and analyzing storage on a bay by bay basis. Further evaluation of these categories is detailed below.

Overall Watercraft Storage

Watercraft storage increased approximately 10% from 9,519 in 2000 to 10,509 in 2002. Storage totals for multiple docks were down approximately 5% from 3,798 in 2000 to 3,603 in 2002. The decrease in Multiple Dock watercraft storage was due to the closing of Gray's Bay Marina, a reduction of 155 Boat Storage Units (BSU's), and the reduction of 24 BSU's on St. Alban's Bay, due to the changeover of Cochrane's Boatyards to St. Alban's Bay Villas. However, these decreases have been offset by net increases of BSU's at Excelsior Bay Harbor (11), Shorewood Yacht Club, Site 2 (28), and Tonka Bay Sales (6). Total riparian storage increased 21% from 5,721 in 2000 to 6,906 in 2002.

Specifically, the largest increase in boat type was in the PWC category, up 34% from 811 in 2000 to 1,086 in 2002. Another upward trend was in the Pontoon category, increasing 14% from 490 in 2000 to 559 in 2002. Fishing boats also increased in number, up 24% from 764 in 2000 to 1,008 in 2002. The combined categories of Cruiser and Runabout remained constant, with less than 1% increase from 2000 to 2002.

3 Boat/4 Boat Storage

As previously mentioned, the number of residences storing three and four restricted watercraft has significantly increased from 541 in 2000 to 639 in 2002, an 18% increase. Staff believes

there are two ways to address this increase. First, the Board could direct staff to take a more proactive approach to evaluate whether these sites comply with LMCD Code relating to boat storage and ownership of watercraft. In order to accomplish this, there would probably be a need to increase LMCD staffing levels. Second, the Board could evaluate LMCD Code relating to boat storage and ownership of watercraft to determine whether any changes should be made to it. Currently, staff evaluates these situations on a public inquiry or complaint basis.

Bay by Bay Storage

With the exception of a few bays, the storage of watercraft on Lake Minnetonka has increased significantly from 2000. This is primarily due to the 21% increase in the number of watercraft stored at riparian residences in 2002 (6,906) compared to 2000 (5,721). Some of the bays that stand out as having the most significant increases in riparian watercraft storage in 2002 compared to 2000 include:

- | | |
|-------------------------|----------------------|
| *Priests Bay (25%) | *Crystal Bay (45%) |
| *Cooks Bay (44%) | *North Arm (26%) |
| *West Upper Lake (25%) | *Stubbs Bay (29%) |
| *South Upper Lake (27%) | *Maxwell Bay (26%) |
| *Phelps Bay (29%) | *Lafayette Bay (34%) |
| *Carmans Bay (26%) | *Robinsons Bay (45%) |
| *Harrisons Bay (113%) | *St. Louis Bay (43%) |
| *Jennings Bay (76%) | *Echo Bay (38%) |

CONCLUSIONS

Staff is concerned with the increase in the number of watercraft being stored at riparian residences in 2002. To further investigate the outcome of the 2002 Lake Minnetonka Storage Count, staff recommends that it be conducted again during the 2003 boating season.