

**2010
LAKE
MINNETONKA**



**SHORELINE
BOAT STORAGE
COUNT**

INTRODUCTION

Beginning in 1971, the Lake Minnetonka Conservation District (LMCD) has conducted an inventory of watercraft being stored at riparian and multiple dock sites (including district mooring areas) on Lake Minnetonka. Since 1971, this project has been conducted during 29 different boating seasons, providing for inventorying even years only from 2000 forward.

The purpose of this Report is to summarize the results of this project conducted in 2010. Three primary objectives were established for the 2010 Shoreline Boat Storage Count. These include:

1. Establish the total number of watercraft stored in 2010.
2. Outline data collected from historical shoreline boat storage counts.
3. Identify any observable trends from the data collected.

METHODOLOGY

To ensure consistency and accuracy in the completion of the 2010 Shoreline Boat Storage Count, LMCD staff established the following five parameters:

1. Survey all 125 miles of lakeshore frontage Mondays through Thursdays. To best represent when LMCD staff could count the maximum number of watercraft stored on Lake Minnetonka, surveying hours were historically set between 8:00 a.m. and 12:00 p.m. As of 2006, the Board requested that staff implement the Proactive Code Enforcement Program in conjunction with the Shoreline Boat Storage Count on a bay-by-bay basis. Due to combining the two programs, surveying hours increased to as late as 4:00 p.m. Friday was established as an alternative day when weather conditions were not favorable or for other reasons. To accommodate for staffing coverage, four Fridays were utilized in 2010.
2. Fieldwork for this project was to be counted during the month of June, with a completion date of July 4th. These dates were selected to best represent when LMCD staff could count the maximum number of watercraft stored on Lake Minnetonka. Due to combining the two programs and accommodating for staff availability, surveying dates were expanded. In 2010, fieldwork for this project commenced on May 25th and was completed on July 27th; as compared to June 9th and July 22nd in 2008. Although a good part of the fieldwork for the 2010 project took place after July 4th, LMCD staff believe this had little or no impact on the outcome of the project.
3. The count of watercraft stored on Lake Minnetonka was conducted by LMCD staff, utilizing the LMCD's 19-foot runabout.

4. A shoreline storage count worksheet was established to assist in conducting the fieldwork for this project. Ten classifications of watercraft were established on this worksheet to categorize each watercraft type. The watercraft classifications include: runabout, cruiser, sailboat, pontoon, houseboat, charterboat, fishing boat, personal watercraft (PWC), aircraft, and miscellaneous. Further definition of the watercraft classifications are outlined in Appendix A.
5. Identify the number of sites that have three or four plus restricted watercraft stored within the authorized dock use area, along with those that have empty slips. For this project, a slip is defined as “either a docking structure with three clearly defined sides or a boatlift”.

SUMMARY OF THE 2010 SHORELINE STORAGE COUNT

The total number of watercraft stored on Lake Minnetonka during the 2010 boating season was 9,230; 5,719 for residential storage and 3,511 for multiple dock facilities (including district mooring areas). Analysis of watercraft storage for the following respective categories are detailed below: 1) riparian sites, 2) multiple dock facilities, 3) sites storing three or more watercraft, and 4) sites maintaining empty slips:

Riparian: Appendix B highlights the 5,719 watercraft stored at riparian sites in 2010. Of these 5,719 watercraft, approximately 52% were found to be in either the runabout or cruiser classification. Further breakdown of this figure indicates that 31% of the watercraft inventoried were runabouts and that 21% were cruisers. The establishment of those figures took into account the removal of watercraft documented that were apart of the Mound Commons Docking Program (see Multiple Docks paragraph below). The lowest percent of watercraft stored at riparian residences were found to be in the houseboat, charter boat, and aircraft classifications, which totaled less than one percent.

Multiple Docks: Appendix C highlights the 3,511 watercraft stored at multiple docks in 2010, including the Mound Commons Docking Program. To further explain, the City of Mound provides the LMCD the total number of watercraft stored within the Common’s Program for the current year (see Appendix C attachment). That total details the number of Personal Watercraft (PWC), with the remainder of watercraft non-categorized (566 - 63 PWC’s = 503). For statistical purposes, staff divided the remaining 503 watercraft (251.5) evenly amongst the runabout and cruiser category; providing for slightly skewed statistics.

Of the 3,511 watercraft, approximately 68% were found to be in the runabout and cruiser classification (including the 503 from the City of Mound). Further breakdown of this figure indicates that 40% of the watercraft were runabouts and that 28% were cruisers. The lowest percentage of watercraft stored at multiple dock facilities were

houseboat, charter boat, and aircraft classifications, which totaled less than one percent.

Three Boats/Four Boats/Empty Slips: Appendix D highlights the number of sites that stored three or four plus restricted watercraft, along with defined empty slips. In 2010, there were 360 sites that stored three watercraft, 207 that stored four or more, and 773 that had empty slips. This compares to 2008 statistics of 332, 188, and 1102, respectively; providing for a 9% increase in three and four boat storage and a 30% decrease in empty slips.

SUMMARY OF HISTORICAL SHORELINE COUNTS

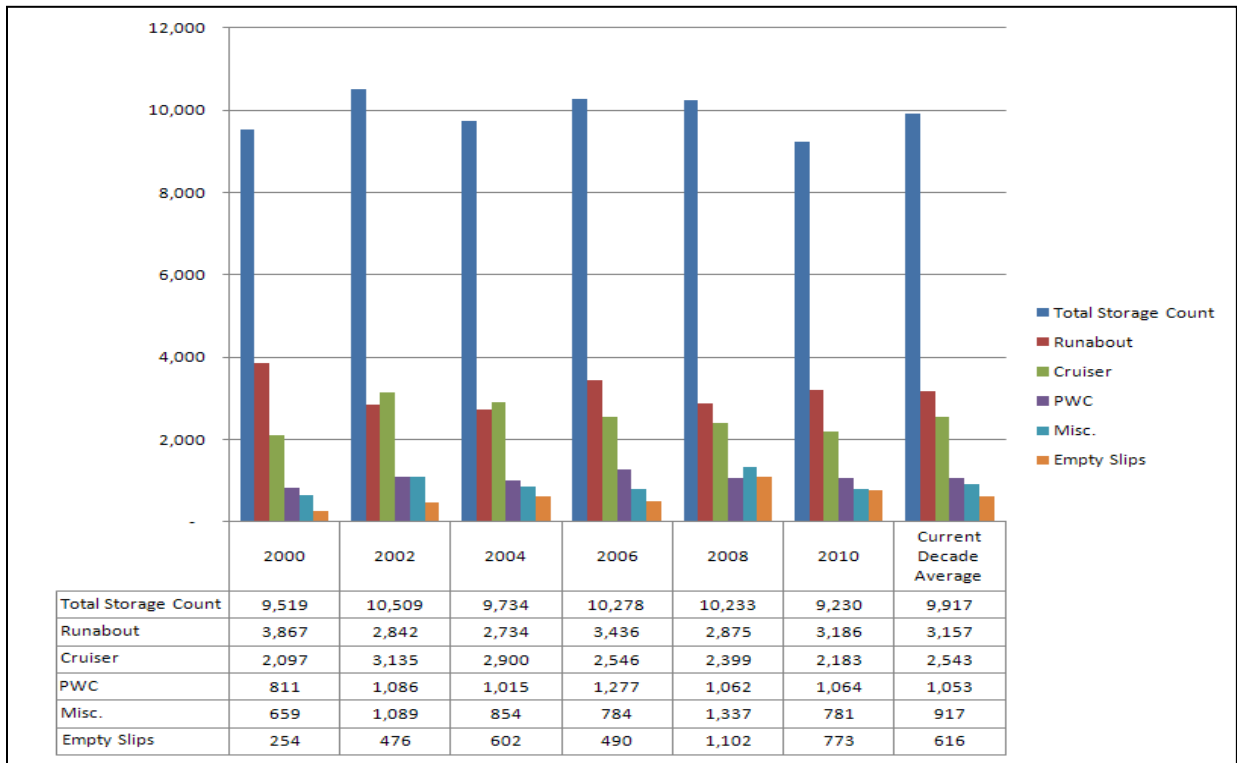
Appendix E highlights historical multiple dock and riparian shoreline counts conducted by the LMCD from 1971 to 2010. In 2010, LMCD staff documented 9,230 watercraft on Lake Minnetonka. Since 1971, there have been only four Shoreline Boat Storage Counts where the total number of watercraft exceeded 10,000 (10,475 in 1996, 10,509 in 2002, 10,278 in 2006, and 10,233 in 2008). Therefore, the current count of 9,230 falls just slightly higher than the all time (1971 to 2010) average of 8,361. Staff would like to preface that the statistical counts performed in the earlier years may not provide for the methodology utilized in the more recent years.

CONCLUSIONS/TRENDS

After review of the historical statistics, staff believed that specific conclusions and trends documented within the current decade warranted notation. Those trends, and respective bar chart, are provided below:

- As noted above, the 2010 total storage count of 9,230 is slightly higher than the all time average of 8,361 (1971 to 2010). However, the current total storage count falls directly in line with this decade's average of 9,917.
- The runabout's current count of 3,186 falls directly in line with this decade's average of 3,157. However, since 2000 the counting of the watercraft's existence has regularly fluctuated. In comparing the current count to counts obtained in 2000 (3,867), 2002 (2,842), 2004 (2,734), 2006 (3,436), and 2008 (2,875), the following percentage changes are offered: 18% decrease, 12% increase, 17% increase, 7% decrease, and 10% increase, respectively.
- The existence of cruisers have consistently reduced in numbers since obtaining the 2002 count of 3,135. As compared to the current count of 2,183, there is a 30% decrease. One might say that the decrease in cruisers contributes to the economy. However, the greatest decrease in cruiser usage was between the years of 2004 (2,900) and 2006 (2,546); a 12% decrease, as compared to 2008 (2,399) and 2010 (2,183); a 9% decrease.

- In 2008, staff had reported a large increase in personal watercraft (PWC) use since 1998. However, since 2002, PWC usage has leveled out. The current PWC count of 1,064 is directly in line with the current decade's average of 1,053.
- Miscellaneous items (as defined in Appendix A) seemed to have peaked in 2002 (1,089) and 2008 (1,337). However, the 2010 usage count of 781 falls just below the current decade average of 917.
- The count of empty slips at individual sites has regularly fluctuated; however, the current count of 773 falls just slightly above the current decade average of 616. There does not seem to be a trend in the total storage count as compared to empty slips. However, the consistent presence of dock and boat lift structures are directly related to homeownership. While in the field, staff had observed homes in mid-summer with their docking structure on land. In questioning as to whether Lake Minnetonka home sale's statistics were available, staff had an opportunity to talk with a local real estate agent. The agent confirmed that the statistics in question were not available. Additionally, the agent stated that there is a perception that there are currently more homes listed; however, he believed that perception was due to the increased length of time signage has remained present; noting more homes are remaining vacant rather than selling. One might consider this trend as a reason for the drop in empty slips.



Based on the historical data outlined, it is the recommendation of staff that the next Shoreline Boat Storage Count remain as scheduled in 2012.

Watercraft Classification Definitions (Appendix A)

- **Runabout-** single hull-pointed bow, tri-hull-blunt bow, hull may be partially covered, windshield often visible. These boats are usually over 16 feet in length, and powered by a 10 horse power motor or more.

- **Cruiser-** super structure, flying bridge, two windshields usually visible, hull mostly covered. This craft usually has sleeping accommodations.

- **Sailboat-** sails often visible, single hull-long slender shape, catamaran-twin hulls visible.

- **Pontoon-** rectangular shape, outboard motor, pontoons extend beyond the platform. These boats are often seen with a colorful canvas top.

- **House Boat-** relatively large, rectangular shape, with blunt rounded bow. This superstructure is sometimes present.

- **Charter Boat-** excursion or party boats that are licensed by LMCD.

- **Fishing Boat-** any boat 14 feet or longer, used for fishing. This craft is usually out-rigged with special fishing equipment.

- **Personal Watercraft (PWC)-** is a watercraft less than 14 feet in length, which uses a motor powering a water jet pump. This water jet pump is its primary source of motive power. This craft is designed to be operated by a person in the sitting, standing or kneeling position, rather than in the conventional manner such as sitting or standing inside the watercraft.

- **Aircraft-** any contrivance invented or designed for navigation or flight in the air. The term includes aircraft equipped with floats or skis.

- **Miscellaneous-** This designation of watercraft includes any craft other than rowboats, 16 feet or less in length. Miscellaneous watercraft are usually unmotorized, or sometimes equipped with motors of 10 hp or less. Some examples of this miscellaneous watercraft are canoes, wet sailboards and paddleboats.

2010 Riparian and Multiple Shoreline Storage Count (Appendix B)

	Runabout	Cruiser	Sailboat	Pontoon	House Boat	Charter	Fishing	PWC	Aircraft	Misc.	Riparian Total *	Multiple Total	Grand Total
1. Halstead Bay	93	54	0	23	2	0	22	46	0	17	257	28	285
2. Priest Bay*	32	51	3	9	1	0	15	31	0	18	130	30	160
3. Cooks Bay (Inc. Lost Lake)*	85	62	5	18	2	0	26	51	0	42	222	75	297
4. West Upper Lake*	70	59	8	16	0	0	28	59	0	19	255	30	285
5. South Upper Lake	70	43	8	9	0	0	19	48	0	29	226	171	397
6. Smithtown Bay	35	23	0	3	0	0	10	26	0	8	105	19	124
7. Phelps Bay*	108	35	9	26	0	0	29	45	0	36	165	123	288
8. East Upper Lake	71	43	6	13	0		20	55	0	21	229	0	229
9. Carman Bay	59	53	6	16	0	0	21	33	0	35	223	12	235
10. Old Channel Bay	22	24	0	2	0	0	2	17	0	6	73	4	77
11. Spring Park Bay	60	25	5	8	0	0	7	30	0	16	151	137	288
12. Black Lake*	37	61	2	18	1	0	20	13	0	21	104	79	183
13. Emerald Lake*	12	19	1	1	0	0	4	3	0	2	37	8	45
14. Seton Lake*	30	26	0	4	0	0	12	3	0	9	51	94	145
15. Harrisons Bay*	144	113	0	38	0	0	28	61	3	23	240	210	450
16. Jennings Bay*	88	81	6	28	1	0	22	61	0	26	255	131	386
	104	94	2	30	0	0	25	65	0	30	345	215	560
18. Forest Lake	56	29	0	11	1	0	15	40	0	28	180	12	192
19. Coffee Cove	26	22	2	2	0	0	4	11	0	10	77	3	80
20. Crystal Bay, West	77	45	2	8	1	0	15	24	0	25	197	8	205
21. Crystal Bay, East	25	18	0	4	0	0	3	16	0	6	72	6	78
22. North Arm	69	31	2	12	0	0	10	13	0	19	156	5	161
23. Stubbs Bay	22	8	0	4	0	0	5	7	0	8	54	14	68
24. Maxwell Bay	30	12	1	3	1	0	2	19	0	2	70	183	253
25. Lafayette Bay	68	64	16	11	0	0	20	38	0	27	244	60	304
26. Smiths Bay	9	3	3	2	0	0	2	2	0	4	25	77	102
27. Tanager Lake	2	4	1	0	0	0	2	0	0	3	12	84	96
28. Browns Bay	26	14	3	3	0	0	5	1	0	6	58	99	157
29. Wayzata Bay	52	39	10	5	0	0	8	18	0	29	161	434	595
30. Grays Bay	36	39	1	6	0	0	7	18	0	14	121	27	148
31. Libbs Lake	64	28	0	5	0	0	6	11	0	22	136	8	144
32. Robinsons Bay	15	7	2	0	0	0	1	3	0	0	28	15	43
33. St. Louis Bay	4	5	4	0	0	0	0	0	0	2	15	240	255
34. Carsons Bay	40	25	16	7	0	0	14	10	0	29	141	219	360
35. St. Albans Bay	66	43	0	10	0	0	9	18	0	31	177	102	279
36. Excelsior Bay	7	1	0	0	0	0	2	1	0	1	12	209	221
37. Gideons Bay	103	78	14	19	0	0	21	36	1	54	326	176	502
38. Echo Bay	23	13	8	4	0	0	9	22	0	20	99	152	251
39. Big Island Passage	0	0	0	0	0	0	1	0	0	0	1	1	2
40. Veterans Bay	2	1	3	4	0	0	6	6	0	10	32	2	34
41. Lower Lake South	46	23	14	1	0	0	5	25	0	21	135	0	135
42. Lower Lake North	46	26	13	2	0	0	8	16	0	11	122	9	131
Total 2010	2034	1444	176	385	10	0	490	1002	4	740	5719	3511	9230
* Minus City of Mound Boat Count (Added to Multiple Dock Statistics)													

2010 Multiple Dock Storage Count (Appendix C)

Other Multiple Dock											Mound *	Total Multiple
	Runabout	Cruiser	Sailboat	Pontoon	House Boat	Charter Boat	Fishing Boat	PWC	Aircraft	Misc.		
1. Halstead Bay	15	11	0	2	0	0	0	0	0	0		28
2. Priest Bay	0	0	0	0	0	0	0	3	0	0	27	30
3. Cooks Bay (Incl. Lost Lake)	0	0	0	0	0	5	1	9	0	0	60	75
4. West Upper Lake	10	11	0	0	0	0	3	2	0	0	4	30
5. South Upper Lake	89	28	9	13	0	0	26	4	0	2		171
6. Smithtown Bay	11	4	0	2	0	0	1	1	0	0		19
7. Phelps Bay	0	0	0	0	0	0	0	22	0	0	101	123
8. East Upper Lake	0	0	0	0	0	0	0	0	0	0		0
9. Carman Bay	6	2	0	0	1	0	2	1	0	0		12
10. Old Channel Bay	3	1	0	0	0	0	0	0	0	0		4
11. Spring Park Bay	50	59	1	13	0	0	14	0	0	0		137
12. Black Lake	6	2	0	2	0	0	0	5	0	0	64	79
13. Emerald Lake	3	0	0	0	0	0	0	0	0	0	5	8
14. Seton Lake*	21	36	0	1	1	0	0	4	0	0	31	94
15. Harrisons Bay*	13	11	0	6	0	1	3	21	0	1	154	210
16. Jennings Bay*	30	26	0	8	0	0	5	10	0	0	52	131
17. West Arm*	158	32	0	14	0	0	6	0	0	0	5	215
18. Forest Lake	5	1	0	1	0	0	1	3	0	1		12
19. Coffee Cove	1	1	0	1	0	0	0	0	0	0		3
20. Crystal Bay, West	5	1	0	0	0	0	1	0	0	1		8
21. Crystal Bay, East	5	0	0	0	0	0	0	0	0	1		6
22. North Arm	3	2	0	0	0	0	0	0	0	0		5
23. Stubbs Bay	3	1	0	2	0	0	0	7	0	1		14
24. Maxwell Bay	133	47	0	1	0	0	0	2	0	0		183
25. Lafayette Bay	29	15	1	2	0	0	3	7	0	3		60
26. Smiths Bay	34	23	16	2	0	0	2	0	0	0		77
27. Tanager Lake	51	22	0	8	0	0	3	0	0	0		84
28. Browns Bay	28	67	1	3	0	0	0	0	0	0		99
29. Wayzata Bay	107	68	209	10	0	0	29	2	0	9		434
30. Grays Bay	8	12	0	5	0	0	2	0	0	0		27
31. Libbs Lake	3	2	1	0	0	0	2	0	0	0		8
32. Robinsons Bay	6	7	0	0	0	0	2	0	0	0		15
33. St. Louis Bay	40	25	96	10	0	0	56	8	0	5		240
34. Carsons Bay	50	22	82	4	0	0	52	6	0	3		219
35. St. Albans Bay	52	35	0	14	0	0	0	1	0	0		102
36. Excelsior Bay	62	79	11	23	0	14	15	0	0	5		209
37. Gideons Bay	47	21	70	13	0	0	14	2	0	9		176
38. Echo Bay	61	64	0	10	0	1	11	5	0	0		152
39. Big Island Passage	0	0	0	0	1	0	0	0	0	0		1
40. Veterans Bay	0	0	0	1	0	0	1	0	0	0		2
41. Lower Lake South	0	0	0	0	0	0	0	0	0	0		0
42. Lower Lake North	4	1	1	2	0	0	1	0	0	0		9
Subtotal 2010	1152	739	498	173	3	21	256	125	0	41	503	3511
* City of Mound PWC's Designated in PWC Column												

2010 Docks with 3 and 4 Boats and Empty Slips (Appendix D)

	3 Boats	4 Boats	Empty Slips
1. Halstead Bay	24	6	20
2. Priest Bay	12	7	10
3. Cooks Bay	15	11	13
4. West Upper Lake	9	12	14
5. South Upper Lake	20	13	20
6. Smithtown Bay	4	5	12
7. Phelps Bay	16	13	16
8. East Upper Lake	18	18	14
9. Carman Bay	17	6	11
10. Old Channel Bay	6	2	9
11. Spring Park Bay	10	4	6
12. Black Lake	5	1	5
13. Emerald Lake	4	1	9
14. Seton Lake	5	4	9
15. Harrisons Bay	21	11	14
16. Jennings Bay	13	17	21
17. West Arm	23	10	39
18. Forest Lake	11	9	18
19. Coffee Cove	6	2	10
20. Crystal Bay, West	13	0	64
21. Crystal Bay, East	2	5	25
22. North Arm	7	1	61
23. Stubbs Bay	0	1	20
24. Maxwell Bay	5	2	21
25. Lafayette Bay	8	9	17
26. Smiths Bay	1	0	5
27. Tanager Lake	1	0	6
28. Browns Bay	1	0	24
29. Wayzata Bay	10	5	41
30. Grays Bay	10	3	16
31. Libbs Lake	6	2	13
32. Robinsons Bay	2	1	7
33. St. Louis Bay	1	0	11
34. Carsons Bay	10	3	31
35. St. Albans Bay	6	0	21
36. Excelsior Bay	0	0	3
37. Gideons Bay	12	7	37
38. Echo Bay	4	6	15
39. Big Island Passage	0	0	0
40. Veterans Bay	2	0	9
41. Lower Lake South	13	7	16
42. Lower Lake North	7	3	40
Total	360	207	773

Historical Multiple and Riparian Shoreline Storage Count (Appendix E)

Year	Runabout	Cruiser	Sailboat	Pontoon	Houseboat	Charter	Fishing	PWC	Aircraft	Misc.	Mound Docking *	Total*
2010	3186	2183	674	558	13	21	746	1064	4	781		9230
2008	2875	2399	693	521	12	22	768	1062	2	1337	542	10233
2006	3436	2546	629	574	20	17	995	1277	0	784		10278
2004	2734	2900	655	557	17	15	986	1015	1	854		9734
2002	2842	3135	728	560	24	30	1007	1086	8	1089		10509
2000	3867	2097	773	490	25	29	764	811	4	659		9519
1999	3788	1592	719	477	31	26	785	639	2	738		8797
1998	3269	1917	720	461	32	20	732	644	4	809		8608
1996	2907	3117	1021	413	48	26	1135	796	4	1008		10475
1994	2629	2812	874	439	47	26	1202	448	8	875		9360
1993	3056	2016	839	381	40	24	1263	318	6	912		8855
1992	2836	2117	840	386	35	25	1245	273	9	881		8647
1991	3258	1350	890	349	37	25	1210	243	8	700		8070
1990	1606	2206	784	304	44	0	824	157	4	720		6649
1989	1653	2568	748	260	62	0	806	0	7	707		6811
1988	1983	2876	966	236	70	0	816	0	5	567		7519
1987	2134	2771	1064	239	61	0	1009	0	5	723		8006
1986	2512	2816	1238	286	99	0	1047	0	3	795		8796
1985	2882	2186	1056	271	104	0	1022	0	3	644		8168
1984	2638	2153	1182	321	94	0	1075	0	4	724		8191
1983	2930	1958	1207	326	89	0	906	0	5	416		7837
1982	2607	1699	1294	351	91	0	1106	0	5	297		7450
1981	2519	1765	1512	342	105	0	848	0	4	681		7776
1980	2632	1630	1135	394	118	0	511	0	5	483		6908
1979	2694	1549	1372	391	113	0	995	0	5	543		7662
1975	3259	1074	1648	448	156	0	1621	0	0	917		9123
1974	3309	872	1288	557	147	0	1850	0	0	903		8926
1973	1543	528	984	506	101	0	1543	0	0	609		5814
1971	1620	320	535	364	91	0	1326	0	0	255		4511
* City of Mound Boat Count Included												