

Boat launches through public accesses on Lake Minnetonka from mid-April to mid-November, 2010

This study was a cooperative effort of the Lake Minnetonka Conservation
District and the Minnesota Department of Natural Resources

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Purpose

The purpose of the study is to measure the use of Lake Minnetonka public accesses during the full open-water boating season, extending from mid-April to mid-November. In the past, public access use was measured by aerial observation on a limited number of days, and the observations covered only summer afternoons. This study extends the seasonal coverage to the spring and fall, and extends the time of day coverage from afternoons to the full day (7 AM to 8 PM).

Study results will be useful for allocating the effort of on-site access personnel, who work to minimize the movement of exotic species into and out of Lake Minnetonka.

Methodology

The study covered the open-water boating season from mid-April (April 17, a Saturday) to mid-November (November 14, a Sunday).

The study involved counts by a field person of boats launched at 9 of the 10 public access sites; one small access site (Code A09) was excluded. At an access site, the field person counted the number of empty trailers, and trailerless car-toppers/pickups that appear to have launched a boat. Boats on trailers (or on car-toppers/pickups) were not counted as a launched boat.

| <u>Code</u> | <u>Access Name</u> |
|-------------|---|
| A01 | Carsons Bay Access (City of Deephaven) |
| A02 | Cooks Bay Access (City of Mound) |
| A03 | Grays Bay Access (DNR / City of Minnetonka) |
| A04 | Halstead Drive Access (City of Minnetrista) |
| A05 | Lake Mtka. Regional Park Access (Three Rivers Park Dist.) |
| A06 | Maxwell Bay Access (DNR) |
| A07 | North Arm Access (Hennepin County) |
| A08 | Spring Park Access (Hennepin County) |
| A09 | EXCLUDED: Tuxedo Blvd. Access (City of Minnetrista) |
| A10 | Wayzata Bay Access (City of Wayzata) |

During each week of the study, one sample weekday and one sample weekend day were chosen at random for counting the 9 public accesses. On each sample day, one time of day was chosen at random for the counts; the times of day are: early (7 to 11 am), mid-day (11 am to 4 pm), and late (4pm to 8pm). The sequence of counting the accesses was varied at random to ensure that an access site was not always counted first or last. In the Fall, the early and late time periods were shortened for the later sunrises and earlier sunsets.

A total of 61 counts were made at each access site during the study. This level of sampling is designed to produce a 95% confidence interval that is within +/- 20% of the overall estimated value, a common design criterion for MN Department of Natural Resource studies of this type. For example, if the overall estimated value is 100, +/- 20% is the interval from 80 to 120.

Results

Lake Minnetonka Conservation District staff coordinated the field work for this study. *All* 61 study counts were conducted on the date and time of day that were specified in the sampling plan.

The estimated number of public access launches for the open-water boating season is 62,112 (Table 1). Most of the launches (68%) occur during the summer, followed by the fall (20%), and spring (12%). Fall has more launches than spring simply because fall is longer. Note that the fall and spring have a similar number of launches per day (173 to 180). The summer has more than double the daily launches of the spring and fall.

Weekend/holidays account for just over half of the launches (53%). On a daily basis, weekend/holidays have 2.5 times as many launches.

The access with the most launches is Grays Bay (33% of total), followed by Maxwell Bay (22%), North Arm (10%), and Spring Park (9%). The other five accesses account for 25 percent of launches.

As noted above, the sampling level was designed to produce a 95% confidence interval within +/- 20% for the overall launch estimate for the open-water season. The actual 95% confidence was +/- 21%, which means the design criterion was roughly met. The variability in access use was underestimated going into the study.

In the past, public access use was measured by aerial observation on summer afternoons. From these aerial observations, estimates were made of total summer launches by access. Those summer estimates are not that far off from estimates in this study, which provides some confidence to the extrapolation techniques used in earlier years (Table 2). The extreme closeness of total summer launches for the two estimates (bottom of Table 2) should be considered fortuitous, and should not be expected to occur regularly.

Table 1

Boat launches through public accesses on Lake Minnetonka from mid-April to mid-November, 2010

| <u>Breakdown</u> | <u>Number of launches</u> | <u>Percent of launches</u> | <u>Days for launching</u> | <u>Launches per day</u> |
|---|----------------------------------|-----------------------------------|----------------------------------|--------------------------------|
| Overall | 62,112 | 100% | 212 | 293 |
| By season* | | | | |
| Spring | 7,275 | 12% | 42 | 173 |
| Summer | 42,416 | 68% | 101 | 420 |
| Fall | 12,421 | 20% | 69 | 180 |
| * Spring: April 17 to Friday prior to Memorial Day weekend (5/28) | | | | |
| * Summer: Memorial Day weekend (5/29) to Labor Day (9/6) | | | | |
| * Fall: Day after Labor Day (9/7) to November 14 | | | | |
| By day of the week | | | | |
| Weekends and holidays | 32,781 | 53% | 65 | 504 |
| Weekdays | 29,331 | 47% | 147 | 200 |
| By public access** | | | | |
| Grays Bay | 20,773 | 33% | 212 | 98 |
| Maxwell Bay | 13,973 | 22% | 212 | 66 |
| North Arm | 6,115 | 10% | 212 | 29 |
| Spring Park | 5,470 | 9% | 212 | 26 |
| Lake Mtka. Regional Park | 4,040 | 7% | 212 | 19 |
| Carsons Bay | 3,197 | 5% | 212 | 15 |
| Halstead Drive | 2,959 | 5% | 212 | 14 |
| Cooks Bay | 2,799 | 5% | 212 | 13 |
| Wayzata Bay | 2,786 | 4% | 212 | 13 |

** Tuxedo Boulevard Access excluded from study due to small size

Table 2

Comparison of summer boat launches through Lake Minnetonka public accesses between this 2010 study and extrapolations from aerial boat counts in 2004

| <u>Public access</u> | 2010 summer launches (percent) | 2004 summer launches (percent) |
|------------------------------|-----------------------------------|-----------------------------------|
| Grays Bay | 31% | 34% |
| Maxwell Bay | 22% | 25% |
| North Arm | 10% | 13% |
| Spring Park | 9% | 5% |
| Lake Mtka. Regional Park | 7% | 9% |
| Carsons Bay | 5% | 2% |
| Halstead Drive | 5% | 5% |
| Wayzata Bay | 5% | 4% |
| Cooks Bay | 5% | 2% |
| Tuxedo Blvd. | <u>(not measured)</u> | <u>1%</u> |
| Total percent | 100% | 100% |
| <i>Total summer launches</i> | <i>42,416</i> | <i>42,037</i> |