

2016 Loon Detectability Study

Looking ahead to a thorough analysis of our loon count data, and knowing many new statistical models for monitoring and survey data have evolved in the last decade, we are asking you for help with a pilot study this year to get an estimate of loon detectability.

Detectability is the likelihood that the results from a survey represent the actual number of animals in the survey area. If detectability is 100%, then we have counted every loon that was present. If it's less than 100%, our counts are actually an underestimate of the true total number of loons. Many of you have experienced the frustration of *knowing* your lake has one or more chicks, but not actually *finding* them in the official half-hour count window. Getting a detectability estimate for the loon count will help us address this issue, refine our population estimate, and allow for a more thorough analysis of historical data.

Thanks in advance for any contributions of additional time and effort for this project!

Directions:

Survey your usual loon count lake or section of lake. Survey any day in July, if possible from from 7 to 7:30 a.m. but outside of that time frame if necessary. There are two survey options, and you can do either or both of the options, depending on your availability:

Repeated survey (two surveys conducted within three days of each other). Our ability to find loons may be different depending on the weather, the distance from the loon(s), and how many loons are together in a group. This survey option will help us determine how our surveys are affected by weather and survey conditions. Collect data for both surveys on the tally sheet on the reverse.

Double surveys (find another observer and conduct two surveys at the same time). You may conduct the survey from the same or from different boats or observation points. However you do the double survey, it is ESSENTIAL you not communicate with the other counter until the survey is complete. Collect data on two different tally sheets.

Each type of survey gives us different information, but both help us get at the essential question of how detectability of loons might be different over time and between multiple observers.

Record the following for each loon observation:

Time and date of observation

of Adults or Chicks

Distance to loon(s):

- 1) Close (can see details of neck and eye (with naked eye), less than 20' away)
- 2) Intermediate (can make out black/white checks on back but details fuzzy, 20'-50' away)
- 3) Distant (dark outline in the distance, more than 50' away)

Water Surface (choose one):

- 1) Generally smooth; little or no wind, waves or chop
- 2) Slightly rough surface; some chop due to wind or wave action
- 3) Very rough surface; lots

Weather (include all that apply):

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|--------------------------|----------------------------|
| 1) Sunny or mostly sunny | 2) Partly to mostly cloudy |
| 3) Complete cloud cover | 4) Light rain |
| 5) Heavy rain | |

