

## 2022 Madge Lake Loon Survey Final Report

This year the ice went off the lake on 16 May, with the loons starting to arrive about a week before, as the ice receded from the shorelines, allowing the birds access to the water. Our first spotting of loon chicks was on 19 June, about the same time as last year.

Circumstances beyond our control resulted in us not doing a count unit 26 June, when we spotted our first chicks. Of the 6 chicks we saw initially, 4 were less than a week old, and two were approximately 2 weeks old. This would put the first hatchings at about the middle of June.

Total numbers of Common Loons this year were similar to previous years, with a high count of 82 adults on 06 August (figure 1 below). We found 13 chicks/Juveniles on the lake, of which 10 survived into mid-September. 6 of those were only discovered as juveniles in early to mid August. We are fairly confident that they were hatched on the lake, as they were closely accompanied by adults in known nesting territories. It is quite possible that the chicks avoided our previous counts by hiding in the reeds which are quite extensive in those territories. This has become more prevalent over the years as boating traffic has increased on the lake.

**Figure 1 - Madge Lake Loon Count Summaries 2010 - 2022**

Survey Year	Total Adults	# of Territorial Pair	Surviving Juveniles	# of Chicks or Juveniles Lost
<b>2010/12 average</b>		25	9	
<b>2013</b>	75	26	14	2
<b>2014</b>	86	26	9	2
<b>2015</b>	78	26	6	2
<b>2016</b>	82	26	10	0
<b>2017</b>	78	25	16	1
<b>2018</b>	72	26	12	0
<b>2019</b>	75	25	7	1
<b>2020</b>	72	26	10	2
<b>2021</b>	80	23	14	1
<b>2022</b>	82	25	10	3

A total of 25 nesting territories were noted this year. This is an increase of 2 territories from 2021. 4 old territories were initially occupied, then abandoned during the summer, and 5 of 6 new territories were re-established from 2020 (See **Figures 2 & 3** below for comparison).

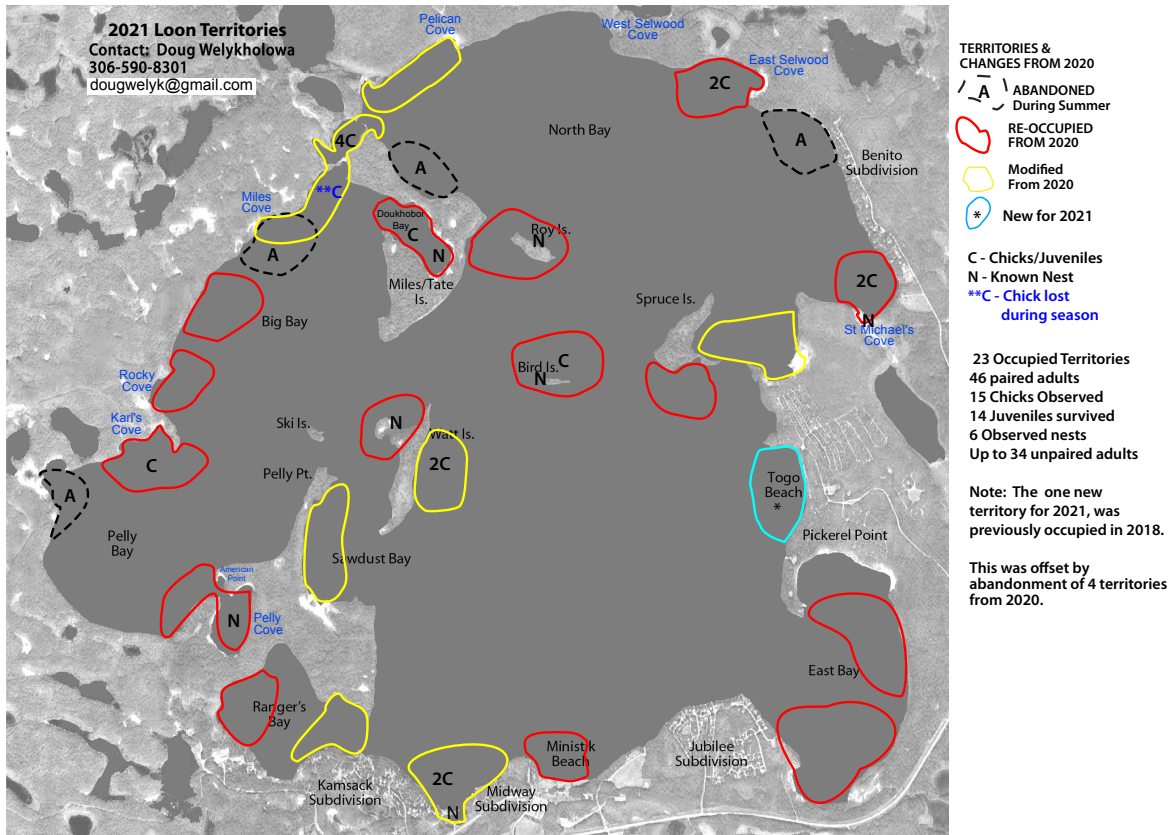


Figure 2 - 2021 Loon Territories

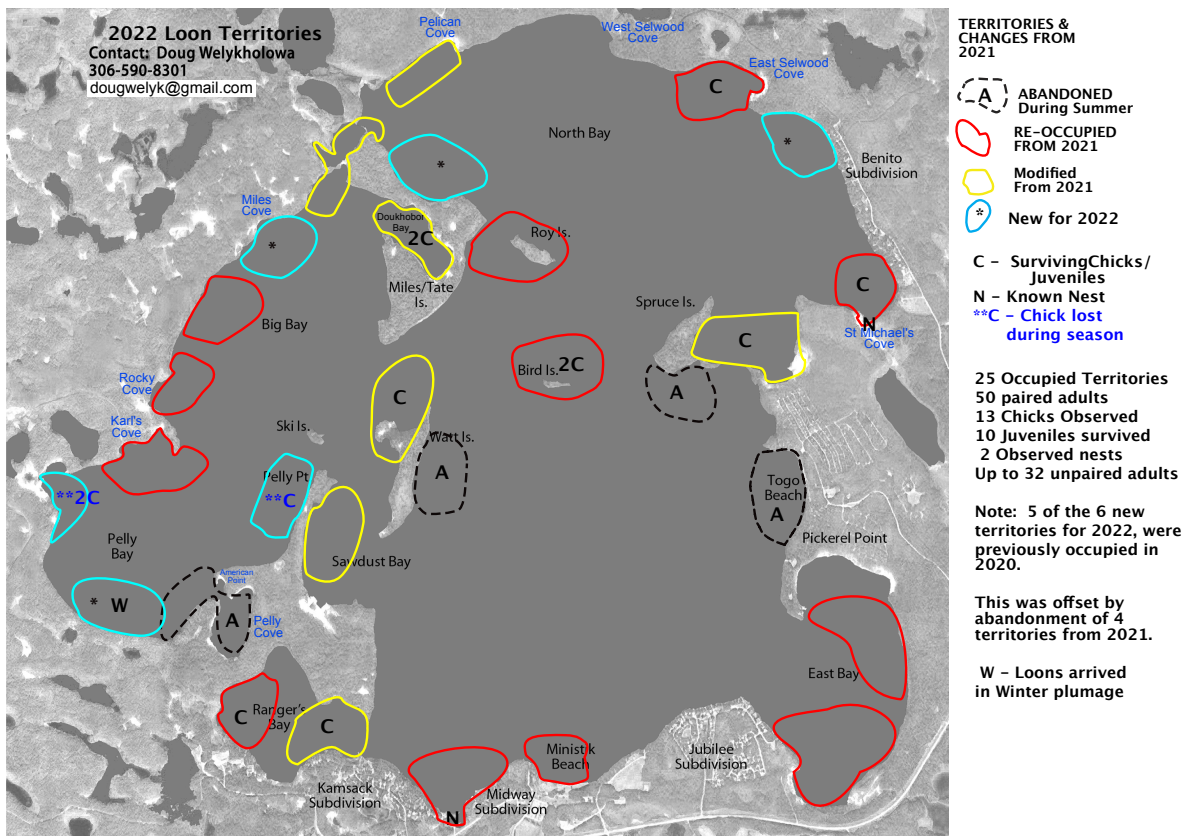


Figure 3 - 2022 Loon Territories



We had a very wet spring and early summer, with the water levels rising over a foot from 2021. This resulted in most of the previously occupied nesting sites having to be relocated to higher ground. As a result, we were only able to directly observe two nests. The one on a beaver lodge near St. Michael's Camp was moved higher on the lodge, while the one in the old boat lagoon had to be moved about 10 feet deeper into the reeds and positioned on the shore. Previously, that nest was built at the edge of the reeds on an old Grebe nest (see photo below).



Loon Nest in foreground with 2 Eggs. The nest was moved from approximately where the adult loon is due to high water drowning the old location.

This pair lost their first set of eggs, then laid another two. Unfortunately, the second set were also lost. This was likely due to predators which had easy access to the shore.





One unusual surprise this year was the arrival of a pair of loons that were still in their winter/non-breeding plumage, into a new territory in Big Bay/Pelly Bay. This pair remained throughout the summer, and while the larger bird (likely the male) did eventually moult into its breeding colours by August, the other bird remained in its winter plumage the entire summer.





Loons in winter plumage - July 2022



One loon has moulted into its breeding colours, while its mate remains in winter colours - 6 August 2022



Loon in winter plumage feeding on a crayfish



While there is normal variation of up to a week in when chicks hatch, we noticed at least one pair, new to the lake, in a new territory, had what was likely a chick from a second laying. On 24 July, where most of the chicks on the lake were around 5 weeks old, this chick was only about 3 weeks. This is common and usually happens every year. See the photos below for comparison:



As in previous years, the lake played host to a large number of unpaired young adults (3-5 year olds). These loons were often spotted in different locations on the lake with each count, and group size varied from 10 to 32 birds, depending on the day. It is quite common for these young adults to gather in larger groups in the middle of the lake during the evening, learning to socialize, while dispersing during the day to feed in other locations, including the many nearby kettle lakes surrounding Madge. Normally you can get into the middle of the group with your boat without the birds getting disturbed.



While the loon population on the lake appears to have remained stable over the last 13 years of data collection, we are beginning to see some disturbing trends in the data. Total numbers of adults have varied between 72 and 86. While the totals are not absolute, given the difficulties in obtaining an accurate count. There are a large number of loon pairs residing on the larger kettle lakes within the park boundary, as well as those just across the border in Manitoba. Many of these likely fly into Madge periodically to feed, and thus can get caught up in our counts. The one steady factor is the number of occupied nesting territories, which average 25.3 per year. The variables are the unpaired adults and any fly-ins. The disturbing trend, with variations from year to year are the number of surviving juveniles produced on the lake. Long term studies by Birds Canada and organizations in the Northern States show that in order to maintain a viable loon population, the average number of surviving chicks (reaching 6 weeks maturity) has to be above .47 chicks per breeding pair. Over the last 13 years Madge lake has averaged only .41 chicks surviving to 6 weeks per breeding pair. This indicates that the loon population on the lake may not be sustainable at the current levels in the future. This is a trend right across North America. In the eastern provinces and Northeastern US, acid rain, pollution and resulting increases in Methyl Mercury are a main cause. Climate change is a contributing factor. Here at Madge, pollution and heavy metals are not thought to be as significant, but this is an area that has not been properly studied. Predators, such as eagles, are also not believed to be a significant problem, however other predators could be a problem. However, one trend that we have observed is a significant increase in power boat traffic each year since we have kept records. As previously mentioned, our observations indicate that the breeding pairs

are taking extra measures to hide their young and keep them out of the high traffic areas in most cases. More research is required to produce definitive answers, but this is well beyond our local capabilities. What ever the answer is, the loons are an excellent indicator of the health of our environment. What affects them, will have broad-reaching consequences in the future, and that should concern us all.

Nature Saskatchewan had its Fall Meet at Madge lake on 24 September 2022. On the Friday, Bob Wynes and I gave a presentation on the Loons at Madge Lake and Trumpeter Swans in the park. On the Saturday, Bob arranged to take a number of participants out on the lake where they were able to observe a number of the remaining Juvenile Loons.

Thanks to everyone who accompanied Bob Wynes and I on our surveys - Nancy Welykholowa, Shevon Wilson, Rob Wilson and Laurie Murray. Also, a big thanks to the Park and its staff for the support they provide us every year. Thank you to YFBTA, the Kamsack Times and Nature Saskatchewan who continually publish this annual report.



Doug Welykholowa  
Chairperson, YFBTA Loon Initiatives Committee  
25 November 2022

**Distribution**

Bob Wynes  
Birds Canada  
Duck Mountain Provincial Park  
Nature Saskatchewan  
YFBTA  
Kamsack Times