

# 2025 Fall Staging Survey of Swans

Kimiwan Lake, Alberta



Photo Credit: Carlene Hardt, USFWS

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## Introduction

Kimiwan Lake is a well-known staging lake for waterfowl (Macdonald 1987) with regional and national importance (Poston et. al. 1990). For many years, the lake staged the highest numbers of swans in the fall in north western Alberta and likely was, at times, the most utilised fall staging wetland for tundra swans in all of Alberta. However staging use in the fall has declined dramatically in recent years.

Both Tundra Swans and Trumpeter Swans stage at the lake, with increasing numbers of Trumpeter Swans present as the Rocky Mountain subpopulation continues to show positive population trends (M.Heckbert pers. comm). Fall staging swan counts at Kimiwan Lake have been undertaken by the Kimiwan Lake Naturalists consecutively since 2001 (Kimiwan Lake Naturalists, 2001-2024).

Historical waterfowl staging counts at the lake were conducted intermittently between 1962 and 1985 by Alberta Fish and Wildlife Services and Ducks Unlimited Canada, however the timing of the surveys (generally August and early September annually) missed the staging swans. Only one survey on October 17, 1985 resulted in the observation of 91 swans at the lake (Macdonald 1987).

Continent-wide surveys for Trumpeter swans were completed every 5 years (1985-2015) and were designed to inventory breeding and nonbreeding Trumpeter swans throughout their known breeding range. However, Kimiwan Lake was not located in an active survey block area for any of the surveys.

Past conservation planning for the Kimiwan Lake Important Bird Area completed by the Kimiwan Lake Naturalists, identified the need for accurate inventories of staging swans as part of an ongoing program of bird population data collection and monitoring. The Kimiwan Lake Naturalists felt that these inventories were important information to support continued efforts to maintain secure staging habitats, free of disturbance at the lake. It is possible that human-caused disturbances during the important staging period for swans may disrupt vital feeding and resting behaviours of swans. The Kimiwan Lake Naturalists believe that they can play an important role in the collection of staging information and as such, have funded the annual staging swan census.

## Methods:

A total of 18 surveys of staging swans were completed at the lake between September 15th and October 30th, 2025 (Table 1). Surveys were completed from the ground, using a spotting scope (15-45x) from a higher elevation point located on the south bank of the lake, within the Town of McLennan, at the corner of 2nd Street East. Starting on October 13th, 2025, surveys were also conducted from Township Road 782 overlooking the entire west and north sides of the lake. This supplemental location was used in order to best survey the high density of the majority of the swans that were concentrated on the north end of the lake.

Swans were concentrated in this area as water levels at the lake had dropped considerably in September and it appeared that the deepest water was located on the north end of the lake. Surveys were completed a minimum of 2 days a week. If inclement weather conditions prevented observation of the lake, the survey was completed the next possible day. Typically surveys were completed in the afternoon or evening when light conditions were most favourable.

Table 1. Numbers of Staging Swans Observed at Kimiwan Lake, 2025

Date	Time (minutes)	Number of swans	Cloud percentage	Light Intensity	Temperature (°C)
09/15/2025	14	36	10	Bright	20
09/18/2025	16	41	0	Bright	13
09/24/2025	11	135	50	Bright	16
09/26/2025	13	407	30	Bright	18
09/29/2025	16	1084	0	Bright	22
10/01/2025	10	1490	100	Medium	10
10/05/2025	20	2900	50	Bright	12
10/10/2025	12	1720	0	Bright	20
10/13/2025	23	6000	15	Medium	5
10/14/2025	28	6309	0	Bright	9
10/15/2025	15	5821	0	Bright	15
10/18/2025	21	4689	80	Bright	8
10/19/2025	11	4213	100	Medium	4
10/21/2025	15	3876	40	Bright	7
10/22/2025	17	3945	15	Bright	12
10/23/2025	12	131	90	Medium	12
10/25/2025	9	643	10	Bright	11
10/29/2025	13	457	100	Medium	3

## Results

Swans were first observed at Kimiwan Lake on September 15th, 2025 (36 swans). The last swans observed were recorded at Kimiwan Lake on October 29th, 2025 (457 swans). The minimum number of swans recorded was 36 (September 15th) and the maximum number of swans recorded was 6,309 (October 14th). When swans were recorded on the lake, the average number of swans recorded at each survey with swans on the lake was 2,439 swans. A total of 43897 swans were observed during the 18 surveys.

Swans were seen at a rate much more in line with historical annual staging expectations compared to previous years. The survey's daily average of 998 swans exceeds the long-term average but is not unusual for Kimiwan Lake's typical migration patterns from 2001-2024. The largest swan staging population fluctuations were between October 10th and October 13th as the number of swans increased from 1,720 to 6,000. No swans were recorded after October 29th, although 100 swans were observed on Winiagami Lake as late as November 9th. Kimiwan Lake was covered by ice by November 3rd.

As observed in previous years, early arrival and delayed migration of staging swans are sometimes observed at Kimiwan Lake. The exact reasons behind this are most likely related to agreeable weather and delayed ice structure. Migration for swans depends primarily on food availability and climate (M. Heckbert pers. comm). The conditions at Kimiwan Lake were still very comfortable for staging swans during peak migration, despite the dropping water levels. Exposed mudflats were observed across the south end of the lake during the surveys.

### Comparison (2025 and 2024)

The 2025 survey revealed a significant increase in swan staging during peak migration. In 2024, only 2,017 swans were observed, compared to 43897 swans in 2025. The highest daily count in 2024 was 492 swans, while in 2025, the daily maximum reached 6309. On average, 112 swans were recorded per survey in 2024. By multiplying the average with the total number of possible survey days (43) resulted in a potential of 4,816 swan-days in 2024. The total number of possible survey days (44) multiplied by the average number of swans recorded in 2024 resulted in 107,316 swans-days in 2025. The swans documented in 2025 arrived during peak migration and in significantly greater numbers than the previous year, indicating a shift in the swan traffic back to Kimiwan Lake. (Heckbert, 2024)

Overall, the average number of swans recorded on Kimiwan Lake in 2025 was substantially larger than that of 2024. The swans arrived earlier, but left around the same time as in 2024 as well, which typically aligns with the first ice cover.

## Discussion

This survey was another comprehensive and systematic survey of staging swans at Kimiwan Lake and has turned out to be a very cost-effective method of quantifying the value of Kimiwan Lake to staging swans. Kimiwan Lake has historically been a highly utilized staging location for swans, although the extent of use by each swan species has not been quantified.

A number of potential reasons for continued decline in fall-staging swan observations at Kimiwan Lake were identified in the 2021 report (Heckbert and Heckbert 2021). It is hypothesized that aquatic macrophyte resources are likely the current limiting factor when evaluated against the likelihood of such factors as population decline, water depths and shoreline disturbance. It may be useful to complete a few surveys each fall going forward on other area lakes to document the overall attractiveness of the area to fall staging swans. The elevated number of swans at Kimiwan Lake this fall could offer valuable insights into changes in the lake's biology and habitat in regards to swan preferences. Water levels were notably lower during this year's survey, despite consistent temperatures and climate conditions compared to previous years, and yet despite this, swan staging use of the lake was much improved compared to more recent years.

### Recommendations

1. Continue the annual survey. Although the numbers of staging swans has declined dramatically, lower trends are part of documenting the biological story at the lake.
2. Counts should be completed near the middle to late part of the day during the peak of swan population on the lake and most favourable survey light.
3. Use local surveyors when possible that can complete the counts accurately and complete surveys according to local weather conditions.
4. Continue, if necessary for completion of accurate counts, to utilize a second survey location on the west side of the lake.

## References

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