**LAKE HINDMARSH WETLAND BIRD MONITORING SURVEYS, 2024-2025**

**Summary report to Wimmera CMA, July 2025**

**Introduction**

The following report is a summary of 12 monthly counts conducted at six sites around the southern side of Lake Hindmarsh, between July 2024 and June 2025.

Five of the sites monitored were the same as previous surveys. These were Site 2, Site 3, Site 4, Site 5 and Site 6. With consideration, Site 1, on the eastern shore of the lake north of Site 2, was dropped because with lower lake levels, few birds occurred there and the site didn’t contribute much to the monitoring project.

Since part-filling in 2022, the water level in the lake has steadily decreased. By July 2024, enough of the lake shore was exposed to allow vehicular access from Four Mile beach to a section of the river, near the mouth. This access point was added to the monitoring sites because it allowed coverage of a deep water section of the river downstream of Site 3. This new site was labelled Site 4R.

The methodology used to monitor wetlands was the same as previous surveys of the lake. For details of the methodology, see previous reports. However, this methodology became increasingly difficult to adhere to as water levels continued to recede. By February 2025, the lake edge was too far away and the shoreline sites could no longer be defined. Because of this, it was not worth continuing to monitor lake edge sites.

After consultation with the WCMA, it was decided that monitoring should continue at the two river sites, as these were the only sites still with water. The Wimmera River became an important refuge for wetland birds, and a number of birds were found congregating and that an extra site at a bend in the river near the Jeparit bridge. Birds were counted here and listed as extras in the monthly reports.

**Results**

The bird monitoring of sites along the southern shore of Lake Hindmarsh between July 2024 and June 2025 recorded large numbers of wetland birds and wide diversity of species. In total, 45 different wetland bird species were recorded during the surveys. The results of the 2024-25 monitoring are summarised in the following series of graphs. Big changes to waterbird numbers occurred between February and March 2025 as the lake dried out. Lake levels receded far from the shoreline. The shoreline sites no longer had water, receding beyond the 500 metre site radius, and therefore could no longer be defined. The monthly monitoring results for each species are shown in Appendix 1

The total number of all wetland birds recorded per month at monitored sites is shown in Figure 1. The results show that, although there was a spike in August 2024, numbers generally increased from July 2024 to a peak in January 2025 of over 13,600 wetland birds, then suddenly declined as the lake dried up. By April 2025, most wetland birds were confined to the Wimmera River, where water remained.

**Figure 1**. Total number of wetland birds counted at monitored sites, July 2024 to June 2025.

The changes in wetland bird populations at Lake Hindmarsh over the monitoring period can be broken down by looking at three main species groups. These groups are waterfowl (ducks, geese, swans), fish-eating birds (pelicans, cormorants, darter), and shorebirds (sandpipers, stilts, avocets, plovers, lapwings).

***Waterfowl***

The most abundant group of birds recorded during the surveys was waterfowl. In total, 11 different species of waterfowl were recorded during the surveys (see Appendix 1). Figure 2 shows the monthly totals of waterfowl at the lake over the 12 month period.

On some months, the ducks were very flighty or a long way offshore and obscured by heat haze, and could not be identified accurately nor easily counted. In these instances, numbers had to be estimated from flock size in the air, or from fuzzy duck-shaped blobs out in the water. These were recorded as unidentified duck species in the monthly results. Most of the unidentified ducks were almost certainly Grey Teal, based on their overwhelming numbers at the lake compared with the other duck species. Australasian Coots, the other wetland bird species which spends a lot of time in flocks in shallow water, do not mix with ducks species in flight if startled off the water. This is because their take-off pattern is different and their flying ability isn’t as strong. Australasian Coots are also black and smaller than most ducks, and can usually be discerned on the water.

**Figure 2**. Total number of waterfowl at monitored sites, July 2024 to June 2025.

The results in Figure 2 show that monthly waterfowl numbers follow closely the total number of birds per month. This is entirely to be expected given that waterfowl consistently made up 90% or more of the monthly wetland bird totals. The large spike in bird numbers in August is due to a large influx of Grey Teal into Lake Hindmarsh that month.

Grey Teal was the most numerous species of waterfowl recorded at the lake. Unsurprisingly, their numbers over the 12 months of monitoring also followed closely the overall pattern of waterfowl numbers (Figure 3).

**Figure 3.** Total number of Grey Teal at all sites, July 2024 to June 2025.

Of the other species of waterfowl, three species - Freckled Duck, Blue-billed Duck and Australasian Shoveler, are listed as threatened on the Victorian FFG Act, March 2025 updated list. Freckled Duck were seen at Site 6 in September and October 2024, with a maximum of 14 birds counted (see Appendix 1). In addition, seven Freckled Duck were seen at the Jeparit Bridge site in February 2025. Australasian Shoveler were recorded on five survey months, with a maximum of 231 birds seen in December 2024. A single Blue-billed Duck was seen in the Wimmera River at Site 4R in February 2025 (Appendix 1).

***Fish-eating birds***

Another group of wetland birds present at Lake Hindmarsh in significant number were fish-eating birds, dominated by Australian Pelican. The monthly totals of fish-eating birds monitored at Lake Hindmarsh are shown in Figure 4.

**Figure 4**. Total number of fish-eating birds across all sites, July 2024 to June 2025.

The results in Figure 4 show a quite different pattern compared to waterfowl. The results for fish-eating birds were dominated by the presence of large numbers of Australian Pelicans (see Appendix 1). Peak numbers were recorded in July, November and December 2024, before declining rapidly from January 2025. However, the numbers recorded from the survey sites don’t tell the whole story of fish-eating birds at Lake Hindmarsh. Beyond the four shoreline monitoring sites, large numbers of pelicans could be seen roosting on exposed banks out in the lake. There could have been thousands more pelicans, and cormorants at other parts of the lake. Previous monitoring has recorded very large numbers of Great Cormorants roosting and foraging along the southern shore of the lake, when water levels were higher. The dip in numbers from August to October 2024 could be due to pelicans being elsewhere at the lake or too far offshore to count within the survey sites.

The number of Great Cormorants surveyed was highest in July 2024 and steadily declined through 2024 to zero in January 2025, and a single individual in April 2025. The numbers of other cormorant species were low throughout the survey period, with the exception of Pied Cormorant, where a flock of 100 were seen from Site 2 in September 2024.

***Shorebirds***

Shorebirds can be divided into two distinct groups – resident species and migratory species. The migratory species comprise mostly those that breed within the palaearctic region of the northern hemisphere. For Australia, almost all palaearctic migrants come from Siberia and Alaska.

The surveys recorded six resident shorebird species and three species of migratory shorebirds (see Appendix 1). The monthly totals of all shorebird species surveyed is shown in Figure 5. Resident species are shown in blue. Migratory species are shown in brown.

**Figure 5.** Total number of resident shorebirds and migratory shorebirds across all monitored sites, July 2024 to June 2025.

The monthly totals show quite a bit of variation in the total numbers of the two shorebird groups, though the migratory species tend to increase between September 2024 and January 2025, after which the shoreline became too far away to survey. Migratory shorebirds also don’t arrive in southern Australia till September, so it is noteworthy that they started using the lake shore continuously since arrival.

The most common migratory shorebird species was Red-necked Stint. A single Eastern Golden Plover was seen at Site 5 during the October 2024 survey. This species is usually occurs on coastal intertidal mudflats, so it was most likely on passage through the area and stopped off at Lake Hindmarsh. The other migratory shorebird species recorded was Sharp-tailed Sandpiper. This species was recorded during four of the monthly surveys, in small numbers except for the November 2024 survey, when a total of 150 birds was counted across Sites 5 and 6.

Of the resident shorebird species, Masked Lapwing and Red-capped Plover were the most frequently recorded. Both these species are likely to breed around the lake, though no breeding activity was recorded during the survey period.

Of the long-legged resident shorebirds, Red-necked Avocets were recorded during five survey months, in August 2024, then from October 2024 to January 2024, with the largest number recorded in October 2024. Black-winged Stilts were also recorded between October 2024 and January 2025, with peak numbers seen in December 2024 (Appendix 1). Banded Stilts, the third species of long-legged resident shorebird, and the most specialized, were only recorded in December 2024 and January 2025. Peak numbers were seen in December, the same month as numbers for Black-winged Stilt. It is possible that these two species move around together. Banded Stilts prefer saline environments and their presence at Lake Hindmarsh indicates an increasing salinity and change in the aquatic fauna from freshwater species to brackish and saline species.

***Other species***

Whiskered Terns were present at the lake mainly between September and November 2024, with peak numbers observed in October. This species feeds mainly on insects and small fish. The sudden arrival and equally sudden departure of this nomadic species indicates changing conditions at the lake which may have provided short duration favourable foraging conditions.

Individual Great Egrets, an FFG listed threatened species, were seen at the lake edge in July to October 2024, and at a river site in May 2025. Individual birds were also seen at the extra site in March and May 2025.

Australian Reed Warblers, a migratory passerine species, were recorded in reeds at the two river sites from August 2024 to April 2025. They no doubt bred in the reedbeds, though no nests were found or searched for. Their presence at the terminal end of the Wimmera River is entirely consistent with their migratory patterns.

Common Froglets were heard calling from the river sites in August and September 2024, and June 2025. Pobblebonks were heard calling from a river site in December 2024. No frogs were heard calling from any of the lake edge sites. This is not unexpected, given the receding water levels in the lake, and the river being the only steady water environment.

**Discussion**

The bird monitoring along the southern edge of Lake Hindmarsh has again demonstrated the great importance of the lake to wetland birds. As the largest lake in Victoria and the terminus of the largest inland river system, Lake Hindmarsh continues to support a significant number of wetland birds and a high diversity of species. It was evident that additional birds, particularly Australian Pelican and waterfowl, were present around the southern edge of the lake beyond the site survey areas. Whether the spike in waterfowl numbers in August 2024 represents an influx of birds from beyond the lake, of birds from another section of the lake, is not important. Either way, the results demonstrate that there are times when thousands of waterfowl, in this case over 13,000 bird, utilise Lake Hindmarsh as habitat.

The drying lake resulted in broad exposed mudflats around the shore, providing ideal habitat for shorebirds, including migratory shorebirds. The three migratory species recorded (Red-necked Stint, Sharp-tailed Sandpiper and Eastern Golden Plover) are all listed on the JAMBA, CAMBA and ROKAMBA migratory bird agreements. The numbers of migratory shorebirds present, and the duration of their stay, indicates the importance of Lake Hindmarsh as an inland habitat, both as migration stop-over habitat and as over-wintering (northern hemisphere) habitat. The sudden drop in numbers in February 2025 is most likely due to them following the receding shoreline, and thus out of view from the shore monitoring sites. If the lake maintains some water, shorebirds will almost certainly be present.

The bird monitoring recorded four wetland bird species listed as threatened species under the FFG Act. Of those in any number – Australasian Shoveler and Freckled Duck, their presence was somewhat erratic. The discovery of Freckled Duck at the extra site in February 2025 indicates a persistence of this species in the area despite the drying of the lake. It also indicates the importance of the lower reaches of the Wimmera River as a drought refuge for wetland birds. The Blue-billed Duck, a species which tends to prefer deeper water, was also seen at a river site after the lake shore had receded.

**Concluding points**

* Lake Hindmarsh is a dynamic system that changes over time depending on inflows, lake water levels, evaporation rates and persistence.
* The dynamic, changing nature of this inland wetland is reflected both in the species diversity present and in the changes in species complex.
* Lake Hindmarsh supports significant numbers of wetland birds when water is present.
* A diverse range of wetland species depend of the lake for habitat.
* Lake Hindmarsh supports both listed threatened species and species on international bird agreements.
* Lake Hindmarsh is a regionally significant wetland for threatened species and migratory species.
* The lower reaches of the Wimmera River becomes an important drought refuge for wetland birds, supporting at times thousands of birds.

Jonathan Starks

July 2025

**Appendix 1**. Results of the Lake Hindmarsh bird monitoring, July 2024 to June 2025.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Species** | **Jul-24** | **Aug-24** | **Sep-24** | **Oct-24** | **Nov-24** | **Dec-24** | **Jan-25** | **Feb-25** | **Mar-25** | **Apr-25** | **May-25** | **Jun-25** |
| Australasian Coot | 135 | 1036 | 1421 | 238 | 27 | 8 | 12 | 7 |  |  | 3 |  |
| Australasian Shoveler |  | 2 | 12 | 4 |  | 231 |  | 7 |  |  |  |  |
| Australian Darter | 3 | 4 | 1 | 1 | 2 | 1 |  |  |  |  |  |  |
| Australian Pelican | 2056 | 426 | 706 | 491 | 2588 | 2852 | 9 | 36 |  | 11 |  |  |
| Australian Shelduck | 110 | 28 | 69 | 153 | 1059 | 174 | 112 |  | 6 |  | 24 | 2 |
| Australian Wood Duck |  |  | 2 |  |  |  |  | 100 | 80 |  |  |  |
| Banded Stilt |  |  |  |  |  | 121 | 55 |  |  |  |  |  |
| Black Swan | 4 | 15 | 51 | 81 | 70 | 153 |  |  |  |  |  |  |
| Black-fronted Dotterel |  |  |  |  |  |  |  |  |  |  |  |  |
| Black-tailed Native-hen |  |  |  | 12 | 7 |  |  | 9 | 14 | 3 |  |  |
| Black-winged Stilt |  |  |  | 15 | 7 | 98 | 57 |  |  |  |  |  |
| Blue-billed Duck |  |  |  |  |  |  |  | 1 |  |  |  |  |
| Caspian Tern |  |  |  |  |  | 1 |  |  |  |  |  |  |
| Chestnut Teal |  | 7 | 2 |  |  |  |  | 1 |  |  |  |  |
| Dusky Moorhen |  |  |  |  |  |  |  |  | 3 | 2 |  | 1 |
| Eastern Golden Plover |  |  |  | 1 |  |  |  |  |  |  |  |  |
| Freckled Duck |  |  | 14 | 6 |  |  |  |  |  |  |  |  |
| Great Cormorant | 680 | 134 | 102 | 21 | 8 | 3 |  |  |  | 1 |  |  |
| Great Crested Grebe |  |  |  |  |  |  |  |  |  |  |  |  |
| Great Egret | 1 | 1 | 1 | 1 |  |  |  |  |  |  | 1 |  |
| Grey Teal | 898 | 11152 | 2217 | 3332 | 1352 | 7497 | 12500 | 1831 | 560 | 1 | 200 | 245 |
| unidentified duck spp | 200 |  |  |  | 400 | 1900 | 300 |  |  |  |  |  |
| Hardhead |  | 2 |  | 17 |  |  |  | 21 |  |  |  |  |
| Hoary-headed Grebe | 42 | 201 | 80 | 46 | 71 |  |  |  | 1 | 1 | 2 | 1 |
| Little Black Cormorant |  | 2 |  |  |  |  |  |  |  |  |  |  |
| **Species cont.** | **Jul-24** | **Aug-24** | **Sep-24** | **Oct-24** | **Nov-24** | **Dec-24** | **Jan-25** | **Feb-25** | **Mar-25** | **Apr-25** | **May-25** | **Jun-25** |
| Little Pied Cormorant | 4 | 7 | 1 |  |  |  |  |  |  |  |  |  |
| Masked Lapwing | 6 | 5 | 7 | 13 | 8 | 9 | 15 |  | 4 | 2 | 4 |  |
| Pacific Black Duck | 10 | 121 | 28 | 14 | 5 | 8 | 2 | 65 | 21 |  | 50 | 18 |
| Pied Cormorant | 1 | 2 | 101 | 4 | 2 |  |  |  |  |  |  |  |
| Pink-eared Duck |  |  |  |  | 110 | 26 | 8 |  |  |  |  |  |
| Purple Swamphen |  | 5 | 8 | 8 | 37 |  | 8 | 7 | 5 | 6 | 3 | 20 |
| Red-capped Plover | 10 | 2 | 25 | 21 | 22 | 38 | 85 | 1 |  |  |  |  |
| Red-kneed Dotterel |  |  |  |  |  |  |  |  | 1 |  |  |  |
| Red-necked Avocet |  | 31 |  | 258 | 45 | 26 | 49 |  |  |  |  |  |
| Red-necked Stint |  |  | 40 | 69 | 63 | 84 | 348 |  |  |  |  |  |
| Royal Spoonbill |  |  | 1 | 2 | 2 |  |  |  |  |  |  |  |
| Sharp-tailed Sandpiper |  |  | 3 |  | 150 | 2 | 11 |  |  |  |  |  |
| Silver Gull | 1 | 20 | 14 | 72 | 34 | 10 | 30 |  |  |  |  |  |
| Yellow-billed Spoonbill |  |  | 4 |  | 14 |  |  |  |  |  | 1 |  |
| Whiskered Tern |  |  | 16 | 577 | 183 |  | 5 |  |  |  |  |  |
| White Ibis |  |  |  |  | 1 |  |  |  |  |  | 2 |  |
| White-faced Heron |  |  |  |  |  | 1 | 3 | 1 | 1 |  |  |  |
| Australian Reed-Warbler |  | 9 | 6 | 10 | 4 | 7 | 8 | 3 | 3 | 2 |  |  |
| Little Grassbird |  | 7 | 4 | 1 |  | 1 |  |  | 1 |  |  |  |
| **TOTALS** | **4161** | **13219** | **4936** | **5468** | **6271** | **13251** | **13617** | **2090** | **700** | **29** | **290** | **287** |