**DOCK LAKE 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 shore of Dock Lake, between July 2024 and June 2025.

The six sites monitored were the same as those covered during previous surveys. At the start of the survey period (July 2024), the water level in Dock Lake was still quite high, close to the treeline, with minimal exposed mudflats around the edge. The lake level began to recede quickly as summer approached. By November there were exposed mudflats around the lake edge but particularly on the western and northern edges.

The receding water level blurred the boundaries between sites because, rather than a discrete section of shoreline edge, sites became one continuous exposed mudflat. By the May 2025 surveys, the mudflat edges extended so far such that birds could really only be counted on the east side of the lake (recorded as Site 4) and the west side of the lake (recorded as Site 6).

The receding water levels over summer, and consequent increase in mudflat areas, had a profound influence of the bird numbers and bird species present at the lake.

Another influence on the wetland bird populations at Dock Lake is its close proximity to other lake systems. Although in one respect Dock Lake is a fairly closed system, as an inflow terminal wetland system surrounded by a narrow but reasonably intact Red Gum vegetation community, there are other open water wetlands nearby, with Green Lake, Taylor’s Lake and Pine Lake all within 6 km, or a short flight apart.

**Results**

The monthly surveys of wetland birds conducted between July 2024 and June 2025 recorded 40 different species of wetland bird. Monthly totals varied significantly over the survey period, with a maximum of over 2,600 birds recorded in February 2025. Few birds were ever seen in the middle of the lake. When the water levels were higher, most birds were seen roosting amongst trees, logs and on banks in water on the western side of the lake, or in rafts in the shallows on the eastern side. The total area of open water at Dock Lake, when near capacity, is approximately 157 hectares. With most of the wetland birds occurring within around 150 metres of the shoreline, the actual area of the lake used by wetland birds is only around 68 hectares. For the February maximum total, this works out to a density of over 38 wetland birds per hectare. In the context of a closed wetland system like Dock Lake, that is quite a high density of wetland birds.

The monthly totals and species recorded are shown in Appendix 1. The total number of wetland bird recorded per month can be seen in Figure 1.

**Figure 1**. Total number of wetland birds recorded per month, July 2024 to June 2025.

The results in Figure 1 show a general increase from the start of the surveys, to a peak in February 2025, followed by a sharp decline then tapering off towards June 2025. The slight dip in September 2024 was caused by disappearance and reappearance of Australasian Coots (see Appendix 1). The sharp decline in February 2025 reflects the rapidly receding water levels. Wetland bird, particularly ducks, could no longer roost on objects in water, which are preferred locations affording wetland birds, mainly waterfowl, safe refuge.

Despite the rapid drying out of the lake over summer, there was still water in the lake in June 2025, and it still supported over 300 birds, more birds than in August and September 2024, when water levels were still high.

The changes in wetland bird populations at Dock Lake 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, sea-eagle), and shorebirds (sandpipers, stilts, avocets, plovers, lapwings).

***Waterfowl***

The most abundant group of birds recorded during the surveys was waterfowl. In total, nine 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. It should be noted that the March 2025 survey happened to take place on the opening day of Duck hunting season. Even though Dock Lake is not a game reserve and it closed to hunting, a large number of vehicles and people were seen camped on the western shore. No shots were heard by me during the survey period, no dead ducks were found in the water or onshore, and no spent cartridges were found around the shore, so it is possible that their presence was coincidental.

**Figure 2.** Total number of waterfowl at Dock Lake, July 2024 to June 2025.

The monthly totals for waterfowl follow closely the pattern of overall wetland bird numbers at the lake – a gradual build-up to a peak in February 2025, followed by a sharp decline. This is to be expected, a waterfowl did make up the vast majority of wetland birds recorded per month, sometimes accounting for up to 88% of the monthly total (March 2025).

**Figure 3.** Total number of Grey Teal per month at Dock Lake, July 2024 to June 2025.

Grey Teal were the most numerous species of waterfowl counted at Dock Lake during 2024-2025. The monthly totals of Grey Teal are shown in Figure 3. Unsurprisingly, the pattern of monthly totals of Grey Teal follow closely the monthly total number of Waterfowl.

Of the other species of waterfowl recorded at Dock Lake during the 2024-25 survey period, two species - Freckled Duck and Australasian Shoveler, are listed as threatened on the Victorian FFG Act, March 2025 updated list. A flock of 20 Freckled Duck were seen at Site 4 (eastern side) in February 2025 (see Appendix 1). Australasian Shoveler were seen on three occasions, with a single individual seen in July 2024 and May 2025, and a flock of 6 birds in February 2025. The month with the highest diversity of waterfowl species was February 2025, with seven waterfowl species present. This was also the month with the highest total number of birds (see Figure 2).

***Fish-eating birds***

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

**Figure 4**. Total number of fish-eating birds per month at Dock Lake, July 2024 to June 2025.

The total number of fish-eating birds at Dock Lake was never high. The monthly totals show a gradual increase from July 2024, very similar to waterfowl. Although there is a slight dip in January 2025, there is a sharp peak in numbers in February 2025, again similar to the total number of waterfowl and of total wetland birds. The largest number of fish-eating birds was actually recorded in April 2025, with 86 birds counted. Of these, 85 were Australian Pelicans. The sharp dip in March 2025 was due to only 8 Australian Pelicans being found at the lake (see Appendix 1).

White-bellied Sea-Eagles were seen at Dock Lake on four occasions, either as single birds or a pair (see Appendix 1). An adult bird was seen hunting shelduck chicks in August 2024, a pair of adults was seen roosting in a tree in January 2025, a single adult was seen in April 2025, and pair of immature birds was seen in May 2025. What this means is that there were at least four different White-bellied Sea-Eagles present to Dock Lake over the 12 month survey period. This species is listed as Threatened under the FFG Act (1988). It is possible that an adult pair occupy a territory encompassing numerous wetlands in the area, and the presence of immature birds suggest local breeding.

***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 seven resident shorebird species and four 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 brown. Migratory species are shown in blue.

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

Of the seven resident shorebird species, Black-fronted Dotterel and Masked Lapwings were the only two species recorded in all survey months. The results in Figure 5 show a gradual increase in the number of resident shorebirds, peaking in April 2025, then declining. The increase coincides with the drying of the lake and the increase in exposed mudflat edge.

Migratory shorebirds did not appear at the lake until February 2025, when two Sharp-tailed Sandpipers were seen. The only migratory shorebird species seen in March 2025 was a single Bar-tailed Godwit. This actually a highly unusual species to turn up at a small inland freshwater wetland. The spike in numbers in April 2025 was due to an influx of 199 Red-necked Stints, many moulting into their breeding plumage, showing traces of red feathering on their chests. Their presence in April is consistent with their northward migration back to their Arctic breeding grounds. The migratory shorebirds quickly oved on, with only three Red-necked Stints seen in May 2025, and none in June.

***Other species***

One of the more interesting occurrences at Dock Lake over the 12 month survey period was finding Silver Gulls breeding at the lake. Silver Gulls were present at the lake every month. In December 2024, a nest with 2 eggs was found in the hollow top of a Red Gum stump that was out in the water. The nest was placed in a clump of grass which was growing in the hollow. Also in December, at a different part of the lake, a downy chick was seen perched on a log in water, accompanied by its parents.

Australian Shelduck was the only other bird species recorded breeding at the lake. In August 2024, a White-bellied Sea-Eagle was seen repeatedly attacking shelduck chicks which were swimming out in the water and being protected by the female. The male shelduck was actively flying at the sea-eagle in an attempt to drive it away.

Brown Quail, also called Swamp Quail, though not strictly a wetland bird, are associated with grassy habitats near wetlands. Brown Quail were heard calling on two occasions at Dock Lake (see Appendix 1).

Australasian Coots were seen in varying numbers till February 2025, with a maximum of 484 birds recorded in December 2024. They were the second most numerous species recorded in December.

Great Egrets were recorded at Dock Lake on three occasions – in October and November 2024, and in June 2025 (see Appendix 1). This species is listed as Threatened under the FFG Act (1988).

Common Froglets were heard calling from the lake shore in August and October 2024. After this, as the lake dried out, the water’s edge receded too far from vegetated sections of the shore, creating conditions unsuitable for frog activity.

This was the only frog species heard at Dock Lake during the 2024-25 survey period.

**Discussion**

The bird monitoring at Dock Lake has again demonstrated the great importance of the lake to wetland birds. Dock Lake supports a high diversity of wetland birds, including large numbers of waterfowl, listed threatened species and birds listed on international migratory bird agreements. The three palaearctic migratory species recorded (Red-necked Stint, Sharp-tailed Sandpiper and Bar-tailed Godwit) are all listed on the JAMBA, CAMBA and ROKAMBA international migratory bird agreements. Their presence, and the relatively large number of Red-necked Stints in April 2025 indicate the importance of Dock Lake as an inland habitat, and particularly as a migration stop-over site.

Two wetland bird species were recorded breeding at the lake. Australian Shelducks are a common and widespread breeding species, requiring large hollow trees in which to nest. With a large number of mature River Red Gum growing around the lake, it is unsurprising that Australian Shelducks bred at or near the lake.

Silver Gulls often breed in large colonies along the coast, such as the very large colony at The Knobbies, on Phillip Island, Westernport Bay. The presence of at least two breeding pairs at Dock Lake indicates that the aquatic and benthic fauna present is sufficiently rich enough to support breeding of this species. The observations of a pair of immature White-bellied Sea-Eagles at Dock Lake, as well as an adult pair, suggests that this species bred on a wetland nearby.

The monitoring at Dock Lake has demonstrated just how important this enclosed wetland is to local and regional bird populations. With water still present in the lake June 2025, and the likelihood of winter rains at least maintaining levels, Dock Lake will continue to function as a local and regionally important wetland.

Jonathan Starks

August 2025

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Wetland bird 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 | 340 | 169 | 34 | 210 | 133 | 484 | 190 | 150 |  |  |  |  |
| Australian Darter |  | 1 |  | 3 | 1 | 1 | 1 |  |  |  |  |  |
| Australian Pelican |  |  |  | 2 | 7 | 19 | 10 | 80 | 8 | 85 | 5 |  |
| Australasian Shoveler | 1 |  |  |  |  |  |  | 6 |  |  | 1 |  |
| Australian Shelduck | 18 | 7 | 2 | 4 | 136 | 66 | 74 | 90 | 521 | 14 | 40 | 24 |
| Australian White Ibis |  |  |  |  |  |  |  | 2 |  |  |  |  |
| Australian Wood Duck | 1 | 7 | 2 |  | 4 | 1 | 15 |  | 6 |  |  |  |
| Banded Stilt |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Bar-tailed Godwit |  |  |  |  |  |  |  |  | 1 |  |  |  |
| Black Swan |  |  |  |  | 3 | 14 | 8 | 6 | 2 |  |  |  |
| Black-fronted Dotterel | 2 | 3 | 3 | 1 | 5 | 2 | 7 | 14 | 4 | 11 | 3 | 8 |
| Black-tailed Nativehen |  |  | 3 | 8 | 14 |  |  | 7 |  |  |  |  |
| Black-winged Stilt |  |  |  |  |  |  | 2 | 4 |  |  | 3 | 4 |
| Chestnut Teal |  |  |  |  | 2 |  | 2 |  |  |  |  | 3 |
| Double-banded Plover |  |  |  |  |  |  |  |  |  | 1 |  |  |
| Freckled Duck |  |  |  |  |  |  |  | 20 |  |  |  |  |
| Great Crested Grebe |  | 9 | 1 |  | 3 | 5 | 3 |  |  |  |  |  |
| Great Cormorant |  |  |  |  | 3 | 1 | 1 |  |  |  |  |  |
| Great Egret |  |  |  | 3 | 1 |  |  |  |  |  |  | 1 |
| Grey Teal | 66 | 46 | 92 | 159 | 396 | 1041 | 1458 | 1975 | 47 | 172 | 127 | 202 |
| Hoary-headed Grebe | 2 | 1 | 1 | 4 | 12 | 7 | 4 | 4 | 3 |  |  |  |
| Little Black Cormorant |  |  | 2 |  |  | 3 |  |  |  |  |  |  |
| Little Pied Cormorant | 1 | 1 |  |  | 2 |  | 2 |  |  |  |  |  |
| Masked Lapwing |  | 4 |  |  | 3 | 10 | 16 | 32 | 22 | 49 | 17 | 12 |
| Pacific Black Duck | 2 | 16 | 7 | 9 | 48 | 16 | 7 | 5 | 8 |  |  |  |
| Pied Cormorant |  |  |  |  | 2 |  |  |  |  |  |  |  |
| **Wetland bird 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** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pink-eared Duck |  |  |  | 2 |  |  |  | 188 | 34 |  |  | 9 |
| Red-capped Plover |  |  |  |  |  |  |  |  | 1 | 24 | 52 | 25 |
| Red-kneed Dotterel |  |  |  |  | 2 | 2 | 8 |  | 1 | 7 | 7 | 9 |
| Red-necked Avocet |  |  |  |  |  |  |  |  |  | 34 |  | 7 |
| Red-necked Stint |  |  |  |  |  |  |  |  |  | 199 | 3 |  |
| Royal Spoonbill |  |  |  |  | 2 |  |  | 1 |  |  |  |  |
| Silver Gull | 6 | 3 | 3 | 1 | 5 | 7 | 6 | 5 | 9 | 32 | 142 | 2 |
| Sharp-tailed Sandpiper |  |  |  |  |  |  |  | 2 |  |  |  |  |
| Whiskered Tern |  |  |  |  | 1 | 3 |  |  |  |  |  |  |
| White-bellied Sea-Eagle |  | 1 |  |  |  |  | 2 |  |  | 1 | 2 |  |
| White-faced Heron |  |  |  | 1 |  | 2 | 1 | 3 | 2 | 2 | 2 |  |
| White-necked Heron |  |  |  |  |  |  |  |  | 1 | 1 | 5 |  |
| Yellow-billed Spoonbill |  |  |  |  |  | 1 | 5 | 14 | 30 | 9 | 8 |  |
| Brown Quail |  |  |  |  | 2 |  |  |  | 2 |  |  |  |
| Common Froglet |  | Y |  |  Y  |  |  |  |  |  |  |  |  |
| **TOTAL BIRDS** | 439 | 268 | 150 | 407 | 787 | 1685 | 1822 | 2608 | 702 | 641 | 417 | 307 |
| **TOTAL SPECIES** | 10 | 13 | 11 | 13 | 23 | 19 | 21 | 20 | 18 | 15 | 15 | 13 |