



DEPARTMENT OF PLANNING, INDUSTRY & ENVIRONMENT

# Report on Commercial Crop Damage by Flying- foxes

Licence Summary 2016–17 and 2017–18



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# Introduction

## Flying-foxes are protected in NSW

On 1 July 2019, the NSW Office of Environment and Heritage was abolished and the NSW National Parks and Wildlife Service (NPWS) was moved into the new NSW Department of Planning, Industry and Environment. For simplicity, this report refers to all agencies that the NPWS has been part of as ‘the Department’. The Department is responsible for administering wildlife protection laws under the *Biodiversity Conservation Act 2016* (BC Act) and the *National Parks and Wildlife Act 1974* (NPW Act).

Three species of flying-fox are known to be in NSW: the grey-headed flying-fox (GHFF) (*Pteropus poliocephalus*), black flying-fox (*Pteropus alecto*) and little red flying-fox (*Pteropus scapulatus*). These are all protected under the BC Act. Before this Act was introduced in August 2017, they were protected under the NPW Act. In 2001, the GHFF was also listed as vulnerable under both the BC Act and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

## Full-exclusion netting reduces crop damage

The Department has a policy in place for the protection of commercial fruit crop damage by flying-foxes (Office of Environment and Heritage 2015b). This policy applies to all three flying-fox species found in NSW and advocates full-exclusion netting as the only reliable method for protecting fruit crops.

In March 2011, the NSW Government announced it would provide financial assistance to eligible orchardists in the Sydney Basin and Central Coast regions to help with the cost of purchasing and installing flying-fox exclusion netting. This subsidy was expanded to cover the whole of NSW, in recognition that since the netting program began, unusually high numbers of flying-foxes had damaged crops around Orange and other locations west of the Great Divide. The subsidy program ended on 30 June 2017, but the Department continues to recommend full-exclusion netting as the most cost-efficient crop protection measure available.

## Limited shooting licences issued

Shooting flying-foxes to mitigate commercial crop damage may be licensed under the BC Act (and previously under the NPW Act) in accordance with the relevant standard operating procedures (Office of Environment and Heritage 2015c). When the GHFF was listed as a threatened species in New South Wales, the Department committed to licensing harm to no more than 1 per cent of the most recent minimum national population estimate. When a national harm limit of 1.5 per cent of the population was introduced, the Department lowered its statewide limit to 0.95 per cent (NSW National Parks and Wildlife Service 2002) and continued using this limit even after the national limit was removed in 2007 (Department of Environment and Climate Change NSW 2007; Department of Environment, Climate Change and Water NSW 2009).

While the national limit was in use, the agreed national population estimate of GHFF was between 320,000 and 340,000 (NSW National Parks and Wildlife Service 2001). Since 2012, the National Flying Fox Monitoring Program (NFFMP) has provided quarterly estimates of GHFF that have fluctuated between around 335,000 (CSIRO 2013a) and 963,000 (CSIRO 2016a). In 2015, a comprehensive review of the results of this program estimated the

population to be 680,000 ( $\pm 164,500$ ) (Westcott et al. 2015). At the time of writing this report, the most recent published estimate of GHFF by the NFFMP is 780,000 (CSIRO 2018).

In 2009, the NSW Flying-fox Licensing Review Panel found the shooting of flying-foxes to be inhumane, ineffective and a threat to the GHFF (Woodhead et al. 2009). For this reason, licences to 'harm' flying-foxes are gradually being phased out in favour of full-exclusion netting. Since July 2015, these licences have only be issued in special circumstances (PDF 42KB).

## Update on shooting licences

This report provides a summary of the licences to harm flying-foxes issued by the Department during the 2016-17 and 2017-18 fruit-growing seasons. It includes the number of licences issued, the number of animals authorised to be harmed and the number of animals actually harmed as reported by licensees.

Tables 1 and 2 summarise this information for the licences issued by each NPWS area during 2016-17 and 2017-18:

- Over these two seasons, 19 licences were issued between November 2016 and November 2017 to commercial orchardists in NSW. These authorised a total of 3948 GHFFs to be harmed. No other species of flying-fox were licensed for harm.
- 16 of these licences were issued in 2016-17, when there was a flying-fox food shortage in the eastern states. When flying-foxes' preferred native food sources are depleted, this can lead to an increase in flying-fox activity in orchards as they search for alternative food sources (Parry-Jones & Augee 1991). This might help explain the spike in licence applications during 2016-17. During this growing season, most flying-foxes (76 per cent) were harmed under licences issued by the NPWS Hawkesbury Area.
- In 2017-18, only three licences were issued – all by the NPWS Valleys Area in North Western Sydney.

Figure 1 shows the trends in licensing since 2001–02:

- The number of flying-foxes licensed to be harmed has been consistently below the statewide harm limits. The limits shown are based on the 2001 minimum population estimate until 2012-13, then the NFFMP May estimates from 2013-14, except for 2015-16 which was based on the minimum estimate by Westcott et al. 2015.
- The number of GHFF reported as harmed under licence has been consistently below the number authorised to be harmed each year. The Department will continue to monitor long-term trends in the number of flying-foxes harmed since the introduction of special circumstances licences.

**Table 1 Licensed numbers vs reported numbers of GHFF harmed during the 2016-17 growing season**

NPWS Branch	NPWS Region	NPWS Area	Number of licences issued	Number of variations issued	Number licensed to be harmed	Reported number harmed	Number of reports returned
Coastal	Central Coast Hunter	Hawkesbury North	2	0	100	95	2
Metro & Mountains	Blue Mountains	Hawkesbury	4	27	2883	2137	28
	Metro North East	Nattai	2	5	215	177	6
		Valleys	8	4	600	406	12
			16	36	3798	2815	48

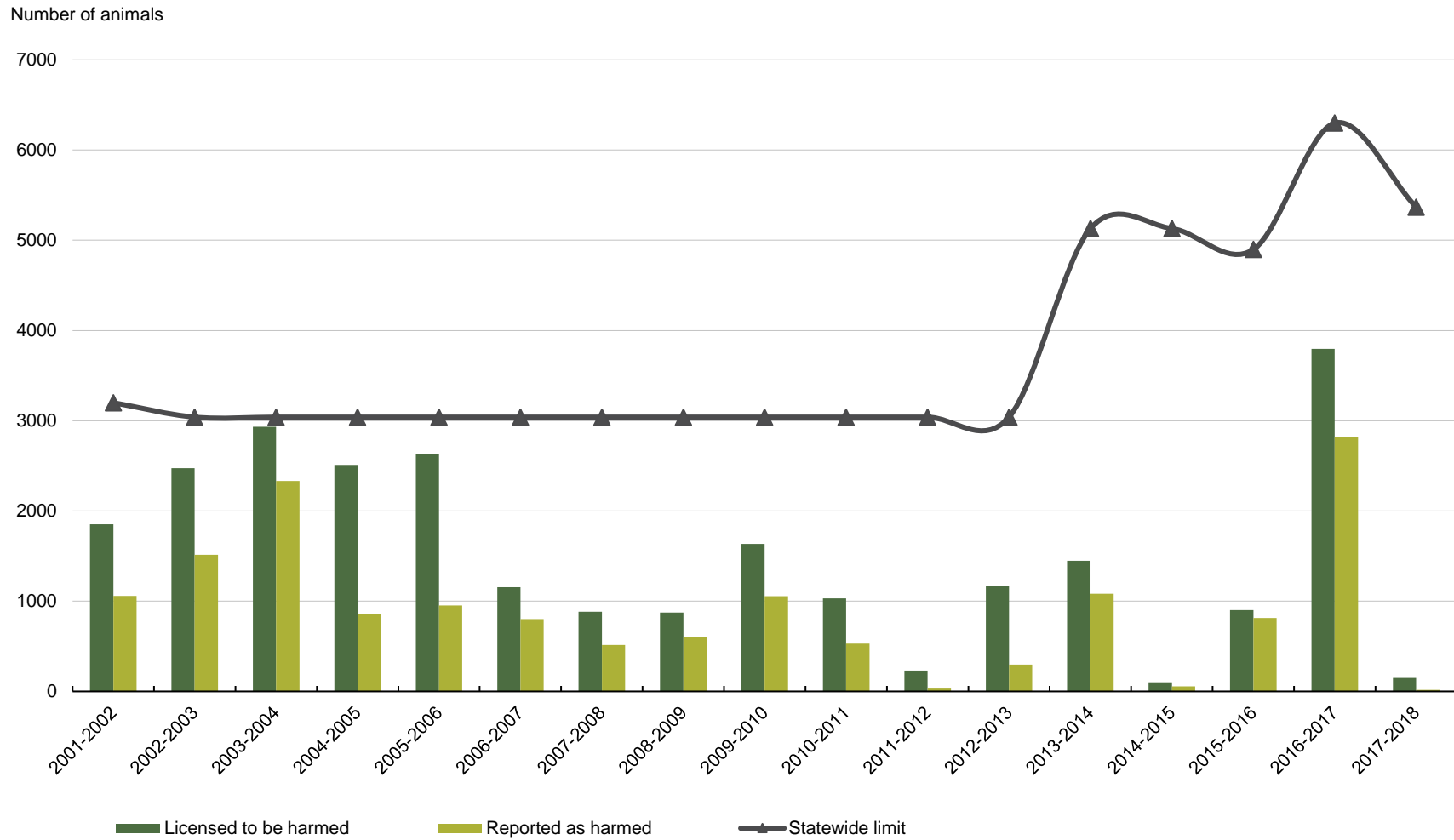
These figures relate to licences to cull GHFF only. No other species of flying-fox were authorised to be harmed during this season.

**Table 2 Licensed numbers vs reported numbers of GHFF harmed during the 2017-18 growing season**

NPWS Branch	NPWS Region	NPWS Area	Number of licences granted	Number of variations granted	Number licensed to be harmed	Reported number harmed	Number of reports returned
Metro & Mountains	Metro North East	Valleys	3	0	150	18	3
			3	0	150	18	3

These figures relate to licences to cull GHFF only. No other species of flying-fox were authorised to be harmed during this season.

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**Figure 1** Numbers of GHFF licensed to be harmed and reported as harmed (culled) from 2001-2018 compared to statewide limit



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