

To: Minister for Outdoor Recreation




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## RECOMMENDATIONS FOR THE 2026 DUCK SEASON ARRANGEMENTS

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### Core message

- The Victorian Government has adopted adaptive harvest management to assist in determining the annual duck season arrangements. The Victorian Game Duck Harvest Strategy sets the parameters under which the seasonal arrangements will be determined. Under the strategy, a proportional harvest level of 10% of the total Victorian game duck population is applied and a bag limit to achieve this is identified.
- Victorian game duck abundance is estimated at approximately 4.9 million birds and the 10% seasonal harvest quota is 486,000. The modelled daily bag limit to achieve the 10% quota is nine (9) ducks per day.
- As part of its due diligence, the GMA Board reviewed the monitoring and modelling program to collect data and provide the modelled daily bag limit recommendation. The GMA Board considers it was robust.
- After thoroughly considering all available information, the GMA Board does not consider there is any apparent reason to deviate from the modelled daily bag limit to achieve the 10% proportional harvest quota. Therefore, the GMA Board recommends that a daily bag limit of nine game ducks is adopted for the 2026 duck season.
- The GMA is available to brief you on this recommendation in person should you wish.

Due	As soon as possible
Explanation	To allow the broader community, industry, the hunting community and government agencies to make arrangements in preparation for the season.

### Recommendation

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That you:

1. approve the GMA recommendation to adopt a daily bag limit of nine (9) game ducks for the 2026 duck season.

Recommendation 1  Endorsed  Not endorsed  Noted  Returned for review

2. note that the GMA will inform the community on the final seasonal arrangements and conduct compliance operations together with its partner agencies.

Recommendation 2  Endorsed  Not endorsed  Noted  Returned for review

3. advise whether you would like an in-person briefing from the GMA Chair of the Board and staff on the above recommendation.

Recommendation 3  Endorsed  Not endorsed  Noted  Returned for review

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Minister's Comments

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<b>Signed</b>	<b>Hon Steve Dimopoulos MP</b> Minister for Outdoor Recreation	<b>Date</b>
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<b>Approved by</b>	<b>Signature removed</b>	<b>Date</b>
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19 January 2026

Chris Rose, Chairperson Game Management Authority ☎ text removed

Endorsed by: Graeme Ford, CEO Game Management Authority ☎ text removed

Prepared by: text removed

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<b>From</b>	GAME MANAGEMENT AUTHORITY	<b>Ref</b>
<b>Title</b>	RECOMMENDATIONS FOR THE 2026 DUCK SEASON ARRANGEMENTS	<b>File</b>
		<b>Due</b> As soon as possible

## 1. Key Information

### Background

The policy settings to inform adaptive harvest management (AHM) are detailed in the Victorian Game Duck Harvest Strategy (Harvest Strategy). Under the Harvest Strategy, the seasonal harvest quota is set at 10% of the total Victorian game duck abundance.

#### *Review and refinements to the monitoring and modelling program*

An important part of adaptive management is the evaluate, learn and adjust phase. The modelling and monitoring program is independently reviewed annually by an expert panel who provides advice to the GMA on the need for any reform.

A number of refinements have been applied to the data collection and statistical and modelling processes as part of continuous improvement and as more data becomes available. See the **Appendix** for details of these refinements.

The GMA's Ethics, Welfare and Science Board Sub-committee reviewed and considered that the AHM monitoring and modelling process was sound and acknowledged the refinements as part of the process of continuous improvement.

### Game duck abundance and habitat extent

The document *Preliminary results from the 2025 survey of game ducks in Victoria and recommendations for seasonal arrangements* (Interim Report) was prepared by the Arthur Rylah Institute for Environmental Research (ARI), Department of Energy, Environment and Climate Action. The Interim Report contains estimates of the extent of game duck habitat in Victoria, an estimate of the total abundance of game ducks in Victoria and a bag limit that would achieve the 10% proportional harvest objective (see **Attachment**).

While the Interim Report and its findings are preliminary in nature and may be revised in the final technical report, experience has shown that any variation in habitat extent and population abundance has not been material. A final technical report will be published in April 2026.

Aerial and ground surveys to determine the number of game ducks on 855 randomly selected waterbodies of different size and habitat type were conducted in October to early-November 2025. Game duck habitat surface water availability was estimated from satellite imagery obtained during spring. Key findings on habitat extent and game duck abundance include:

- The number of waterbodies categorised as containing surface water was estimated at 234,093. This was a 68% increase compared with the estimate from the previous survey in 2024 (139,440).
- Overall, surface water area in 2025 increased by 9% compared to that in 2024 (183,196 ha), resulting in a total surface water area of 199,026 ha (see **Figure 1**).

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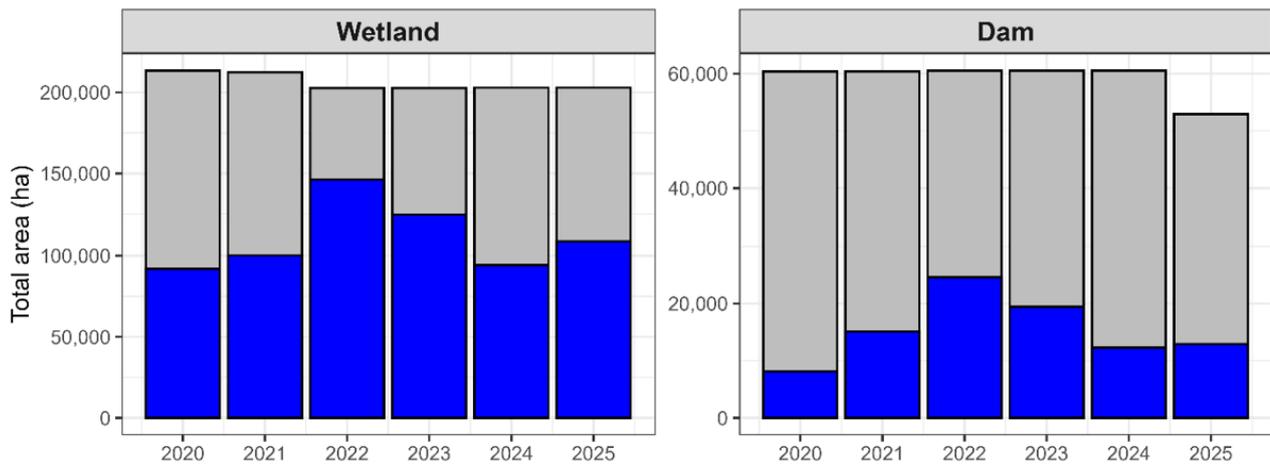


Figure 1: Temporal pattern in surface water for Victorian waterbodies 2020 - 2025

- Estimates indicated that the total population of game ducks in Victoria was approximately 4.9 million birds<sup>1</sup>. This is an approximate increase of 22% compared with the previous year (4 million) and was the second highest abundance recorded since total abundance estimates started in 2020 (see Figure 2).
- With the exception of Chestnut Teal, all game duck species with an open season increased in abundance from the previous year (see Table 3, Attachment). Grey Teal were the most numerous game species (~1.65 M), followed by Wood Duck (~1.47 M), Pacific Black Duck (~838,000) and Chestnut Teal (~522,000).

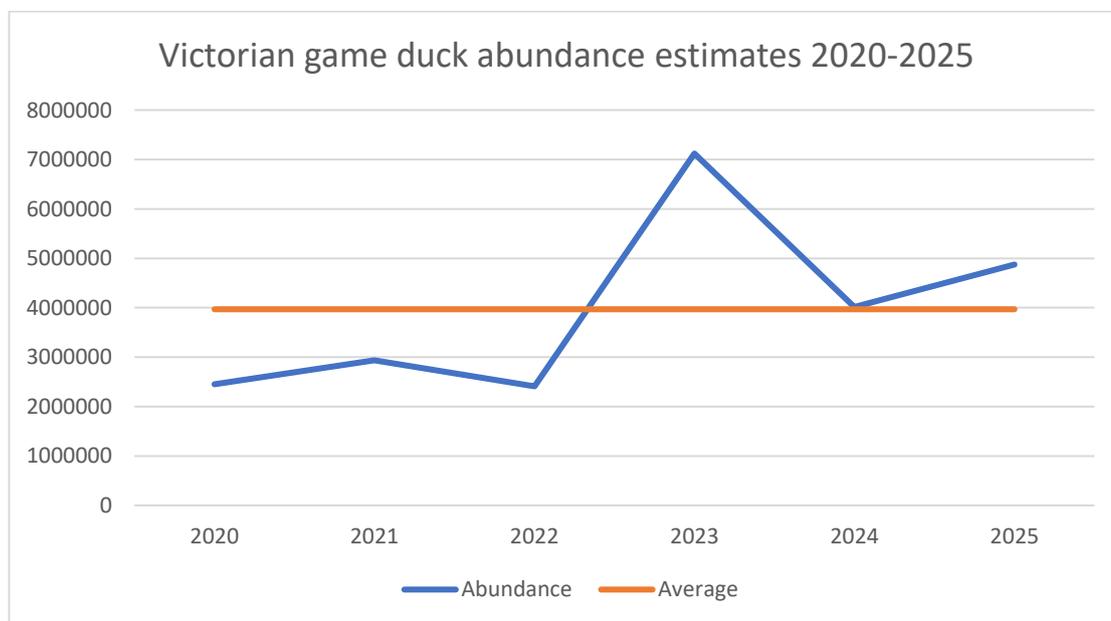


Figure 2: Estimated Victorian game duck abundance 2020 - 2025

- Precision of the overall estimate of abundance was good, with a 3% (0.03) coefficient of variation, well within the target threshold of 15% as being of adequate precision.

<sup>1</sup> Excludes Blue-winged Shoveler as it cannot be hunted.

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### Bag limit recommendation

The Harvest Strategy states that the harvest will be set at 10% of the total game duck abundance and recognises that the actual quota percentage may be slightly higher to achieve the nearest bag limit whole number.

Even though it has been shown that important game duck species can collectively withstand a long-term harvest level of 20%, the conservative 10% proportional harvest target was set in the Harvest Strategy as a precautionary measure in the early stages of implementing AHM. Precision in modelling should improve over time as sample sizes for each set bag limit increases and this level may be reconsidered in future. First year performance of the bag model was good (12.2%) and was within 1.8% of the 2025 harvest target of 10.4%.

For the 2026 season, a model which considers the relationship between harvest, daily bag limit, season length and total hunting days was used to predict the bag limit that was most compatible with achieving a 10% level of harvest (i.e., 486,000 ducks).

The Interim Report provides a table of estimated harvest levels associated with different bag limits (see Table 4, **Attachment**). Analysis revealed that a daily bag limit of nine (9) birds is the smallest value that would result in an expected proportional harvest of at least 10% (10.3%). A daily bag limit of nine birds would be expected to result in a total harvest of approximately 498,456 ducks.

Analysis was also conducted to determine how a daily bag limit of nine would affect the harvest level for six of the game duck species (Grey Teal, Australian Wood Duck, Pacific Black Duck, Australian Shelduck, Pink-eared Duck and Chestnut Teal). Analysis revealed that a daily bag limit of nine would be expected to result in a harvest under 10% for all species except Pacific Black Duck (18%) and Pink-eared Duck (36%).

Predicted Pacific Black Duck harvest still falls within the sustainable maximum of 20% as identified by Prowse (2023)<sup>2</sup>. The predicted harvest of Pink-eared Duck (PED) is approximately 36% of the Victorian population. However, due to the ecology, biology and distribution of this species, it is considered that this point-in-time level of harvest poses no long-term threat to the conservation status of the species. The following points are of relevance:

- According to the 43 year Eastern Australian Waterbird Survey which determines a population index of abundance for waterbirds, including game duck species, the PED is the second most numerous game duck species in eastern Australia.
- The stronghold of the species is in the Murray-Darling Basin and the principal range of the species occurs in inland New South Wales and southern central Queensland. Victoria is on the southern fringe of the species' range and Victoria's harvest generally affects only a small proportion of the total eastern Australian population.
- The proportional harvest of the PED in Victoria in 2025 was unusually high at 37%. Other harvest levels since absolute abundance estimates began in 2020 were 4.6% in 2024 and 1.8% in 2022. Data were not available for the other years.
- On average, the PED makes up only 3% of the total Victorian game duck harvest. Since 2009, the long-term average seasonal harvest of PED was 9,327. This equates to 2.8% of the long-term total average seasonal harvest of all species combined (334,100).
- The impacts of harvesting in Victoria are diluted by immigration of the species from adjoining states.

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<sup>2</sup> Prowse, T. (2023). Conservation and Sustainable-Harvest Models for Game Duck Species. Report prepared for the Department of Jobs, Skills, Industry and Regions

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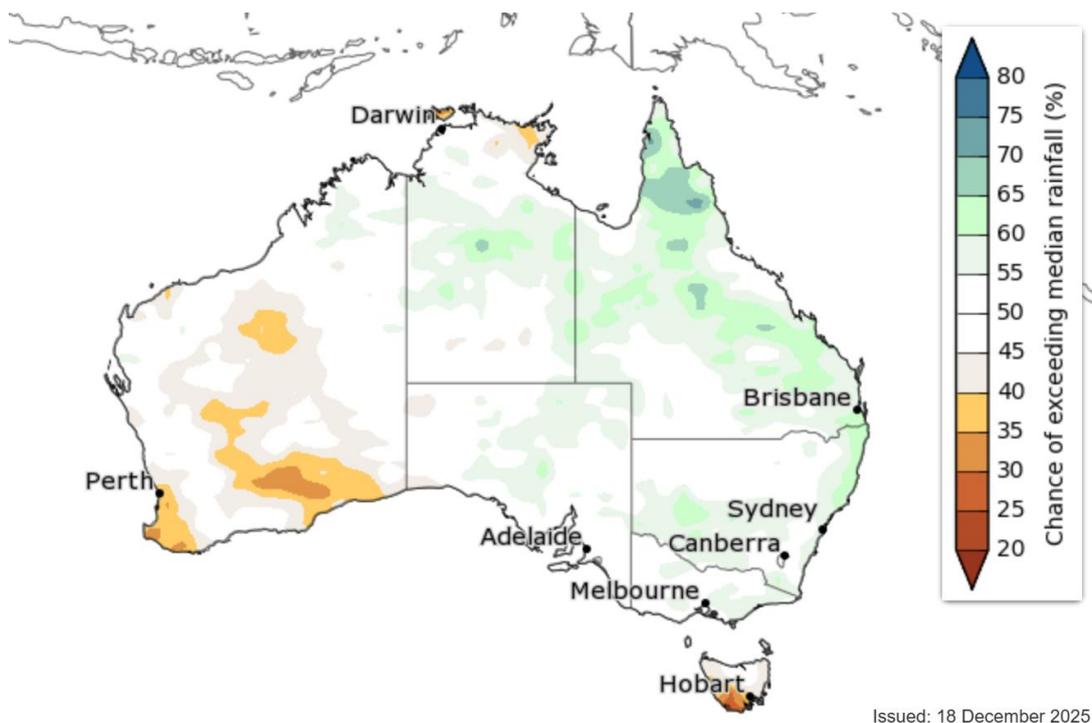
A short-term run of higher harvest will not cause lasting impacts on such an abundant and widely distributed game species. It is only when excessive harvesting is allowed to persist for an extended period of time that it presents a risk. This will not occur under the current AHM framework given the process of regular review and adjustment.

If it is shown that specific species are regularly experiencing harvest levels in excess of 20%, the move to species-specific or some alternate bag setting arrangement could be considered during the review of the Harvest Strategy in 2028.

### Other considerations – additional sources of mortality

To date, state and national monitoring agencies have not detected high pathogenic avian influenza in Australian wildlife populations. According to a lead expert in the field of wildlife virology, the chance of the disease being transported into Australia after the main spring shorebird migration period is low.

The Bureau of Meteorology has predicted that for much of Australia, there are roughly equal chances of above or below average rainfall over the three months to March (see **Figure 3**). If this occurs, there is no apparent risk of drought-induced above-average mortality between now and the start of the duck season.



**Figure 3:** Rainfall outlook for Australia for January to March 2026 (source Bureau of Meteorology)

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### Flora and Fauna Guarantee Act

Section 4B of the *Flora and Fauna Guarantee Act 1988* (FFG Act) requires Ministers and public authorities (including the GMA) to give proper consideration of the objectives<sup>3</sup> of the Act in performing any of their functions that may reasonably be expected to impact on biodiversity in Victoria. In addition, a Minister and a public authority, so far as is consistent with the proper exercising of their functions, must give proper consideration to any instrument made under this Act, including— (a) the Biodiversity Strategy; and (b) action statements; and (c) critical habitat determinations; and (d) management plans. Consideration must be given to the potential impacts on biodiversity, including:

- long and short-term impacts
- beneficial and detrimental impacts
- direct and indirect impacts
- cumulative impacts and
- the impacts of potentially threatening processes.

Government policy supports recreational duck hunting and it is regulated primarily under the *Wildlife Act 1975* and the *Wildlife (Game) Regulations 2024*. Sustainable limits have been established and are set out in the *Harvest Strategy*.

The impacts of hunting on game species are monitored annually by the GMA to ensure sustainability. Abundance, habitat extent and harvest levels are surveyed annually. No threatened species are subject to lawful harvest and illegal destruction can result in significant fines and/or imprisonment. Impacts on non-game species are minimised through education and information, testing requirements for hunters, mechanisms to close wetlands to hunting or further regulate hunting where significant concentrations of threatened species or breeding waterbirds are present and enforcement. There are significant penalties for failing to comply with hunting regulations.

The advice on bag limits contained in this brief is consistent with sustainable harvest levels set out in government policy and according to the regulatory framework. Adaptive management applies regular performance review and modification when required to achieve the sustainable harvest management objective of a 10% proportional harvest. This approach to harvest management is consistent with the objectives of the FFG Act.

### Social and economic impact

The GMA uses the current policy settings as prescribed in the *Wildlife (Game) Regulations 2024* as the base line for assessing the social and economic impacts of any recommendation to vary from the prescribed arrangements. Given the *Harvest Strategy* focusses on adjusting the daily bag limit as the key harvest control, there are no recommendations to vary the prescribed season length. For this season, there are also no recommendations to regulate the species available for hunting or set species-specific bag limits.

The AHM modelled bag limit to achieve the 10% seasonal quota of nine birds per day is one less than the prescribed 10 birds per day. This reduction will affect few hunters as most cannot achieve such a daily limit.

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<sup>3</sup> The objectives of this Act are— (a) to guarantee that all taxa of Victoria's flora and fauna, other than taxa specified in the Excluded List, can persist and improve in the wild and retain their capacity to adapt to environmental change; and (b) to prevent taxa and communities of flora and fauna from becoming threatened and to recover threatened taxa and communities so their conservation status improves; and (c) to protect, conserve, restore and enhance biodiversity, including (i) flora and fauna and their habitats; and (ii) genetic diversity; and (iii) ecological communities; and (iv) ecological processes; and (d) to identify and mitigate the impacts of potentially threatening processes to address the important underlying causes of biodiversity decline; and (e) to ensure the use of biodiversity as a natural resource is ecologically sustainable; and (f) to identify and conserve areas of Victoria in respect of which critical habitat determinations are made.

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Therefore, it is unlikely that a nine-bird bag limit will act as a disincentive for the majority of hunters to go hunting.

For those people, businesses or sections of the community who oppose or who are negatively impacted by duck hunting, adoption of the recommended daily bag limit does not increase nor decrease impacts over the current prescribed arrangements.

### Animal welfare

The current extent of wounding in duck hunting is unknown, although historic levels have been estimated. Through its RESPECT Hunt Responsibly and REDUCE wounding programs, the GMA works with hunting organisations to raise hunter awareness, improve skills and encourage responsible hunting behaviours to reduce wounding and improve animal welfare outcomes.

Government has committed to implementing the Waterfowl Wounding Reduction Action Plan (WWRAP) under the government's Sustainable Hunting Action Plan and response to the Parliamentary Inquiry. The WWRAP contains a number of measures to increase hunter awareness of the wounding issue, educate hunters on ways to reduce wounding, introduces a knowledge test for new and existing hunters and explores the merits of hunter proficiency testing. A program to monitor trends in wounding levels has already commenced and research into identifying wounding rates in Victorian duck hunting is in the planning stage.

### Reducing impacts on non-game wildlife

All duck hunters are required to pass the Waterfowl Identification Test before being allowed to hunt duck in Victoria. The test seeks to ensure that hunters have the necessary skills to distinguish between game and non-game waterbirds when hunting. The requirements for passing the test have been increased in recent years. The GMA works with hunting organisations to raise hunters' awareness and the community is encouraged to report illegal hunting to the GMA.

To further minimise the risk of non-game species being illegally destroyed or unduly disturbed, the Minister can close wetlands to duck hunting or additionally regulate hunting (e.g. prohibiting hunting from boats) where significant concentrations of threatened or breeding waterbirds are detected. In conjunction with DEECA, wetlands are surveyed in February and, where numbers of birds exceed established trigger-levels, management options are considered and a recommendation will be made to you after consultation with key stakeholders. The GMA and DEECA also respond to community reports of concentrations of threatened or breeding waterbirds which are verified and considered for recommendation for closure or further regulation. Closed or further regulated wetlands are advertised, promoted by GMA and land managers, signposted and enforced to maximise compliance.

### Recommendation

The modelling and monitoring programs associated with AHM have undergone a continual process of review and refinement guided by the expertise of ARI, an independent review of the monitoring and modelling program and the expert panel formed by the GMA.

The GMA Board accepts that the game bird abundance and bag limit modelling provides a sound basis to identify a daily bag limit which will achieve the government's 10% proportional harvest quota. Considering this, the GMA recommends that a daily bag limit of nine (9) birds is adopted for the 2026 duck season.

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## Context

### **Duck hunting in Victoria**

Duck hunting is permitted under the *Wildlife Act 1975*. The season length, species composition, bag limits and hunting methods are prescribed under the Wildlife (Game) Regulations 2024. Under these regulations, a duck hunting season occurs annually, commencing on the third Wednesday in March and concluding on the second Monday in June each year. Seven duck species may be hunted. Public land classification determines whether hunting is allowed or not and hunting on private property is at the discretion of the landowner.

There are approximately 21,000 licensed duck hunters who, on average, harvest 334,100 game ducks annually.

### **Modifying a duck hunting season**

Under section 86 of the *Wildlife Act 1975*, the Minister, by notice in the Government Gazette, may further regulate the duck hunting season where there is a need to alter the prescribed seasonal arrangements.

Under a Supplement to the General Order for the Administration of Acts dated 1 December 2023, section 86 of the *Wildlife Act 1975* is jointly administered by you, as Minister for Outdoor Recreation and as the Minister for Environment.

### **Role of the Game Management Authority in setting duck season arrangements**

Under section 5(a) of the *Game Management Authority Act 2014* (GMA Act), an objective of the GMA is to 'promote sustainability and responsibility in game hunting in Victoria.'

Under section 6(h), the GMA is to 'monitor, conduct research and analyse the environmental, social and economic impacts of game hunting and game management' and under section 6(i), the GMA may make recommendations to relevant Ministers in relation to:

- (i) game hunting and game management, and
- (iii) open and closed seasons and bag limits.

Also, section 8A 'Guiding principles' requires the GMA to have regard to the following relevant principles when exercising its powers or performing its functions:

- (b) the principle of triple bottom-line assessment, which means an assessment of all the economic, social and environmental costs and benefits, taking into account externalities;
- (d) the principle of an evidence-based approach, which means considering the best available information when making decisions.

The advice provided by the GMA on the annual duck season relates only to season settings for the forthcoming season. It does not relate to the broader policy of allowing duck hunting.

### **Enforcement of the hunting season**

The GMA works closely with its regulatory partners to ensure hunting is conducted lawfully and responsibly. Authorised officers from DEECA and Parks Victoria, together with Victoria Police, support the GMA during periods of greatest hunting activity and at other times during the hunting season. Enforcement operations are targeted according to a risk-based, intelligence-led approach with a focus on public safety, sustainability and compliance with the law. Random patrols are also conducted throughout the season on both public and private waters.

### **Communication plan to support the hunting season**

The GMA will implement a targeted communication plan using appropriate social and traditional platforms to inform the community on the arrangements for the 2026 duck season once decided by government.

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Communications will also promote safe and responsible behaviour by all involved in duck hunting. The REDUCE wounding campaign will also be promoted to improve animal welfare outcomes.

In recognition of the Parliamentary Inquiry and through continuing to improve sustainable outcomes, the GMA will raise hunter awareness of Aboriginal cultural heritage sites and cultural artefacts and arrangements for reporting damage or destruction to these.

### Attachments

**Attachment** Preliminary results from the 2025 survey of game ducks in Victoria and recommendations for seasonal arrangements. Arthur Rylah Institute for Environmental Research, Department of Energy, Environment and Climate Action.

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## Appendix

### Refinements to the AHM modelling and monitoring program

An important part of the adaptive management cycle is to evaluate the outcome of applying chosen management actions, learning and adjusting actions as required to achieve the management objective. The modelling and monitoring program used to inform AHM is independently reviewed annually by an expert panel who provides advice to the GMA on the need for any reform. This advice is considered and improvements made as required.

Since being designed, a number of refinements have been applied to the data collection and statistical and modelling processes as part of continuous improvement and as more data becomes available. Past improvements include:

- increasing the sample size of the waterbodies, including large wetlands
- including waterways (rivers, large streams) as additional habitat strata and adding large storage dams to the sampling design
- increasing the coverage of waterbodies throughout the state by including ground counts on waterbodies where it was not feasible to conduct aerial surveys
- including methods for obtaining separate abundance estimates for Grey and Chestnut Teal (to address their similarities in appearance)
- modification to the aerial survey methods involving partial counts of large waterbodies to ensure the main waterbody as well as the edge is counted
- investigating alternative models for improving the detection probabilities of game ducks by observers.

In preparation for the 2026 duck season, the following additional refinements have been made:

#### *Abundance model*

Several new explanatory variables were tested in the abundance model, including:

- Total rainfall in the vicinity of each waterbody (5km x 5km grid cell) over the previous three months
- Updated waterbody classifications

Initial investigations suggest the inclusion of three-monthly rainfall data has slightly improved model fit.

#### *Bag modelling*

The following changes were made to the bag model:

- The total number of licence holders was removed from the model and replaced with the total number of hunting days. This has resulted in improved model fit.
- The variable "COVID" indicating covid-19-affected years was removed from the model.

Other variables were investigated including the proportion of licence holders who hunted and percentage of hunters achieving their bag. These appear to be of limited utility as the model would require values for these variables for the 2026 season.