FGA Comments to season considerations and recommendation for the 2022 Victorian Duck Season

Rainfall

- FGA acknowledges that 2021 has been the wettest year since 2016 across Victoria and the Murray Darling Basin and in addition to this it has been in the top 5 wettest years over the last 30 years.
- Despite below average rainfall in far Northwest Victoria and across the border into eastern South Australia. Waterfowl are triggered into significant breeding and population increases where floods occur. Pockets of areas that remain at below average rainfall has no relevance especially for the highly mobile game duck species such as Grey Teal, Hardhead, Pink-Ear Duck and Australasian Shoveler they simply move from these dry areas to the flooded areas.
- Our expectation is that a 2022 Duck Season would see similar outcomes as to 2017.
- Climate forecasts indicate a La Nina to continue into Autumn and a resultant higher than median rainfall. This will maintain current habitat and possibly increase available habitat creating greater game bird dispersion

Soil Moisture, Runoff and Water storages

- FGA acknowledges Increased soil moisture and subsequent run off has a direct influence in the creation and maintenance of wetland habitat.
- The situation for Western Victoria and eastern South Australia like the previous page is not relevant in influencing the total abundance of game ducks.
- In addition, this increasing runoff has raised storage dam levels significantly across the MDB. Water Storage levels are on average between 20% and 30% higher than last year. This would provide water managers more options for the delivery of environmental water not only this year and in coming years, which would further enhance breeding opportunities and abundance.
- It is FGA's view that with water storages across Victoria and the Murray Darling Basin at the highest levels since 2016, that this presents a tremendous opportunity to deliver widespread environmental water to Wetlands and especially State Game Reserves across the state that under pre-European settlement and the subsequent changes to the landscape would have filled naturally.

Eastern Australian Waterbird Survey (EAWS)

- It is FGA's view that the Eastern Australian Waterbird Survey is not fit for purpose for determining waterfowl hunting seasons and data from it should no longer be utilised in the considerations process. It is concerning there continues to be a over reliance on this survey.
- A key example of this is looking at the 2016 survey which only saw 2,588 game birds counted across bands 1 to 3. Yet a un-modified season was declared for the 2017 season and there were 438,353 birds harvested. Conditions from high rainfall this year are similar to 2016.
- What has been ignored in the considerations process is the MDB survey the UNSW team conduct at the same time using the same methods. This surveys key wetlands outside the 10 transect bands from the EAWS in the Murray Darling Basin. These counts have been conducted each year since 2009. In all but 2 of these years this survey has seen a much higher abundance than the whole 10 bands of the EAWS combined. As a example in 2016 this survey had 940% more game birds than the EAWS.
- Based on the above it is clear the EAWS does not survey key game bird locations.
- Who and what is driving this consistent reliance on EAWS within the GMA? How is it possible that given the EAWS found 54 Chestnut Teal that this can be taken seriously as scientific method?

Preliminary results from the 2021 survey of game ducks in Victoria.

- The report states that there was a decrease from 180,000 to 150,000 small (<6ha) dams with water across Victoria.
- Considering the high rain fall with the associated high soil moisture and runoff across most of the state this is highly questionable in its accuracy. One would expect to see more dams with water not less. Based on last years numbers the drop in dams of 30,000 would equate to approx. 239,000 less game birds across the state.
- Referring to Geoscience Australia's website www.ga.gov.au/scientific-topics/community-safety/flood/wofs/faqs it states that for a water body to be detected it needs to be approximately 50m by 50m in size. This would exclude a significant amount of farm dams across the state. Also cloud cover at the time a satellite travels over the state could preclude waterbodies being detected which in the case of recent months we have had high frequency of cloud cover.
- https://cmi.ga.gov.au/data-products/dea/456/waterbodies#details states that there is a under representation of water within vegetated wetlands, such as the Macquarie Marshes, NSW. Again, this would be more prominent in wet years and cause the waterbody count across the state to be well underrepresented from the reality. Therefore, based on the modelling methods used to calculate an estimated game duck abundance this would ensure that number to is well underrepresented from reality.

Preliminary results from the 2021 survey of game ducks in Victoria cont.

- The report indicates it could not include irrigation channels for consideration as only 4 that were sampled had water or were not present at the indicated location. Many irrigation channels especially in the Wimmera and Mallee have been piped and no longer exist. There is an abundance of irrigation channels that hold water year-round in other irrigation districts such as the Goulburn system. According to the dot point map in this paper no streams were surveyed in this area. This would have a significant impact on the estimated abundance of the species that frequent these habitats in high numbers such as Wood Duck and Pacific Black Duck.
- The other habitat type that is not considered in the modelling is dry land pasture which provides significant feeding habitat for Mountain Duck, Wood Duck and Pacific Black Duck. We believe this should be considered in future work when estimating populations for these species.
- The estimated abundance of Grey Teal and Hardhead are significantly down on last year. This will be driven by the very significant flood events in NSW which these two species will react to in movement and dispersion. It is no surprise this has occurred, and we can see the result of this in the 250% increase in Game Duck numbers from the previous year from the NSW Riverina abundance survey. It is also reflected in bands 2, 3, 5 and 6 in the EAWS having the highest abundance of waterbirds. These lower numbers should not be used as justification for a modified bag limit.
- The Vic ARI Heli survey in addition to the NSW DPI Riverina Survey indicate significant increases in abundance over the 2020 counts, this should indicate a significant lift in the bag limit of 5 from last year.

Season offtake

- FGA believe that the 10% offtake should not be set in stone. For a AHM to be truly adaptive it should have a floor and ceiling level dependent on estimated abundance across Victoria, the NSW DPI survey and rainfall conditions.
- It should also factor in the drop in recorded abundance in wet years when dispersal is high not only across Victoria but also across the Murray Darling basin and beyond, meaning in wet years when we are yet to see the impact in abundance the off take is set at the ceiling.
- FGA are also of the view when a particular species such as Wood Duck has a very high estimated population that there is provision to increase the bag limit for that species over the general bag limit the AHM comes to.

Interim harvest model outcomes report

- FGA's view is this is using mathematics in a manner to reach a pre-determined outcome that a full legislated season only be considered as an exception rather than the norm.
- The mathematical calculations are set in a manner that no matter how much habitat and birds there are that it would never calculate a bag limit of more than 10. There is nothing adaptive about this.
- It is reliant on EAWS data which is not fit for purpose and is the reason why even in a significant year such as 2017 it delivers an APS of only 4 and for 2011 (the wettest in) only 6.
- It was not included in the GMA considerations document for the 2022 season and therefore when also considering the above points, it's recommendation not be included in the decision-making process for the 2022 Duck Season.
- This IHM appears to come to a predetermined outcome and the modelling is set to produce a modified season recommendation to a higher degree when compared to the ARI helicopter survey using the offtake model based on estimated abundance, why are we not using the most accurate methods and methodology to produce the IHM?
- We understand the IHM model has the capacity to use the ARI helicopter data instead of the EAWS and Vic Priority game bird counts. What does the Aps score come to when using the ARI data?

Hardhead

- Upon review of the documents released under FOI surrounding the process for setting the 2020 Victorian Duck Season, FGA have discovered there was correspondence between DEWLP and GMA with DEWLP enquiring to the GMA to have Hardhead removed from the game list.
- Reviewing data from the Victorian Summer Waterfowl count conducted by the Arthur Rylah Institute, 2019 saw the highest abundance for Hardhead on a 3-year moving average basis since the survey began in 1987.
- On this basis it is FGA's view that Hardhead remaining on the game list is sustainable now and into the future.

2022 Duck Season Recommendation

- FGA's view is the current methodology used in the Preliminary results from the 2021 survey of game ducks in Victoria is underestimating the true picture of game duck population and with that the upper 95% confidence interval figure of 3.576m should be the basis on calculating the desired maximum harvest from.
- It is also our view with the significant habitat improvements across much of the country and the high dispersion of game species a ceiling offtake of 20% be set for this season.
- Based on calculations from Abundance Estimates for Game Ducks in Victoria Results from the 2020 Aerial Survey, this would equate to a full-length season and a bag limit of 14 birds per day.
- With consideration of the above and the significant increase in estimated Wood Duck population by adding rivers into the survey. Our view the Wood Duck population is still significantly underrepresented with irrigation channels not included and question marks over the small dam coverage, our season recommendation is:
  - **Season to open on Saturday 19th March at 7:30AM and conclude 30 minutes after sunset on Monday 13th of June. This would be a season of 87 days as per the regulated season.**
  - **A bag limit of 10 birds per day including a maximum of 2 Australasian Shoveler per day, plus up to an additional 5 wood ducks per day.**