Arizona Mule Deer Populations Presented to WAFWA and Other Sources

(Western Association of Fish and Wildlife Agencies)

Year	Year for Estimate	Arizona		
Link to Source		Range	Estimate	Harvest
2012	2011	No estimate		
2013	2012	75,000 - 120,000	97,500	
2014	2013	75,000 - 120,000	97,500	7,326
2015	2014	90,000 - 100,000	95,000	
2016	2015	90,000 - 100,000	95,000	
2017	2016	85,000 - 100,000	92,500	
2018	2017	85,000 - 100,000	92,500	
2019	2018	85,000 - 100,000	92,500	
2020	2019	85,000 - 100,000	92,500	
2021	2020	85,000 - 100,000	92,500	
2022	2021	80,000 - 90,000	85,000	6,869
2023	2022	80,000 - 90,000	85,000	6,747
2024	2023	80,000 - 90,000	85,000	7,780

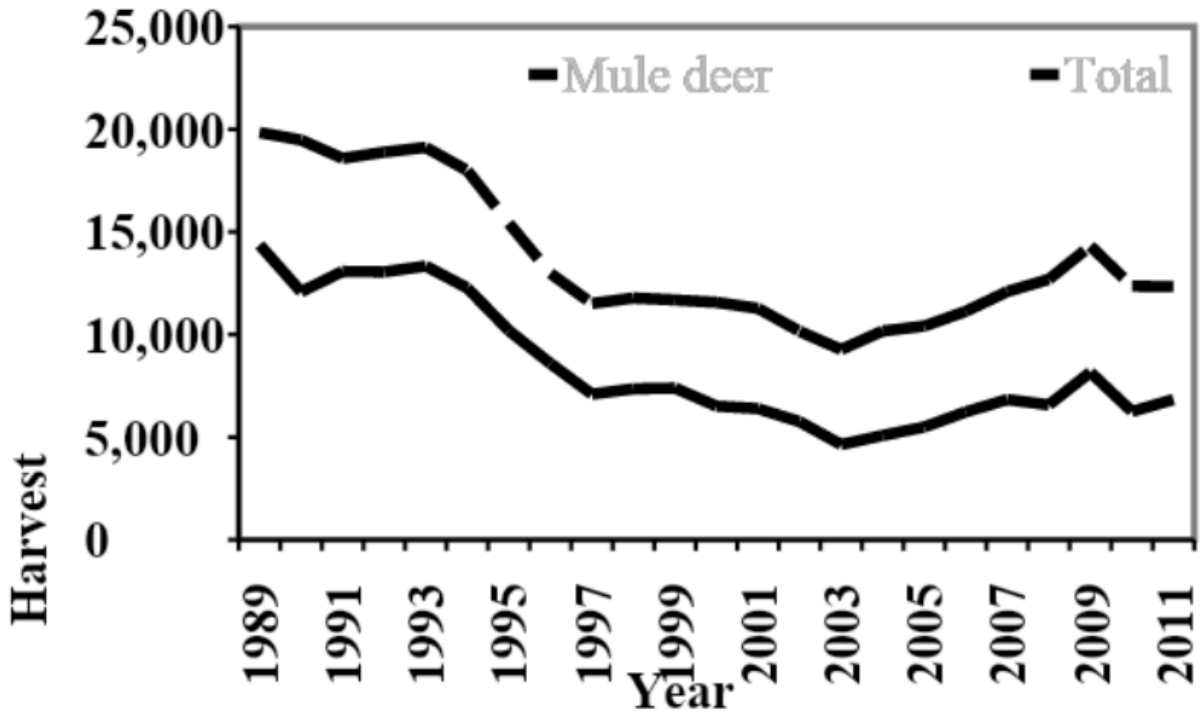
Other harvest data from below from 2014 WAFWA report, page 5: total mule deer harvest reached the most recent low in 2003, with a harvest of only 5,254 (all weapon types). In 2012, 7,144 mule deer were harvested, indicating a 36% increase – and probably a similar population increase as well. This is still 53% below the 1983 harvest of 13,076.

New Study Advocates Reintroducing Jaguars in Arizona and New Mexico May 20, 2021
Field & Stream
... A new study published in the scientific journal, Conservation Science and Practice ... Arizona currently has an estimated population of 85,000 Coues deer, 105,000 mule deer, and 30,000 elk, while New Mexico has up to 15,000 Coues deer, 100,000 mule deer, and 106,000 elk.., [numbers are for 2018]

The study

WAFWA Information below

2012 below
Arizona has seen a few years with improved recruitment. Buck to doe ratios statewide were at 22:100, whereas fawn to doe ratios statewide were at 42:100. Harvest reached a recent peak in 2009, although harvest has been on an increasing general trend since 2003.



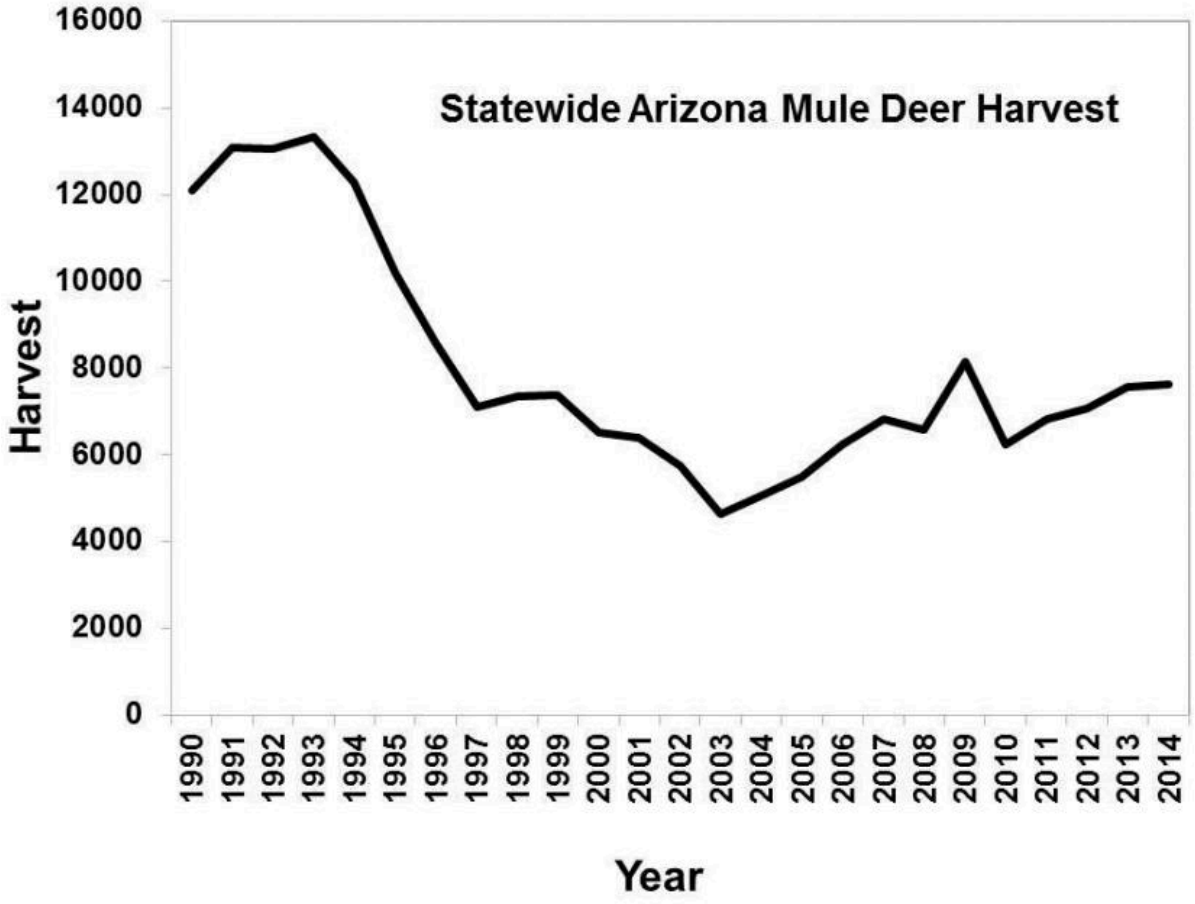
From WAFWA 2013 p. 6 below:

Mule deer populations reached the most recent peak in the early 1980s. Mule deer declined through about 2000 and since then have probably increased by about 10%.

Specifically, total mule deer harvest reached the most recent low in 2003, with a harvest of only 5,254 (all weapon types). In 2012, 7,144 mule deer were harvested, indicating a

36% increase – and probably a similar population increase as well. This is still 53% below the 1983 harvest of 13,076.

From WAFWA 2015 below

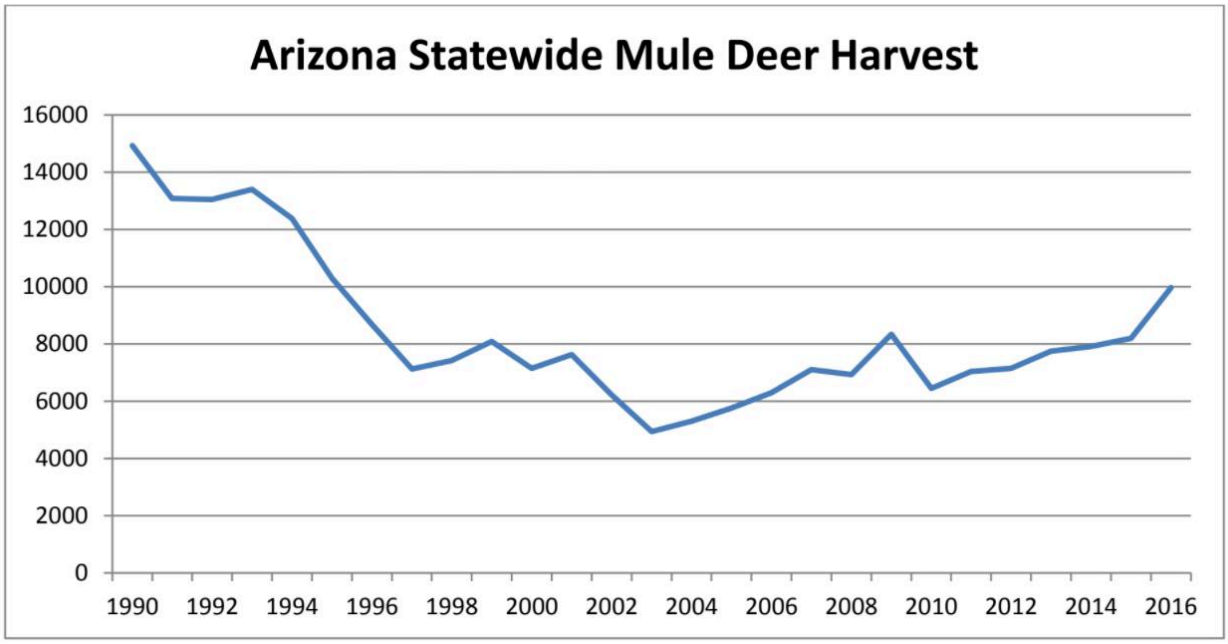


“Total mule deer harvest reached the most recent low in 2003, with a harvest of only 4,638 (all weapon types). In 2014, 7,567 mule deer were harvested, representing a 63% increase in harvest from that historic low point, but still only 43% of the 1986 peak harvest of 17,413. Population parameters indicate the statewide population has increased by about 30% in the last 10-15 years.” p. 6

From 2016 below

“Mule deer populations reached the most recent peak in the mid-1980s. Mule deer declined through 2000 and since then have increased gradually.”

From 2017 below



From 2018 below

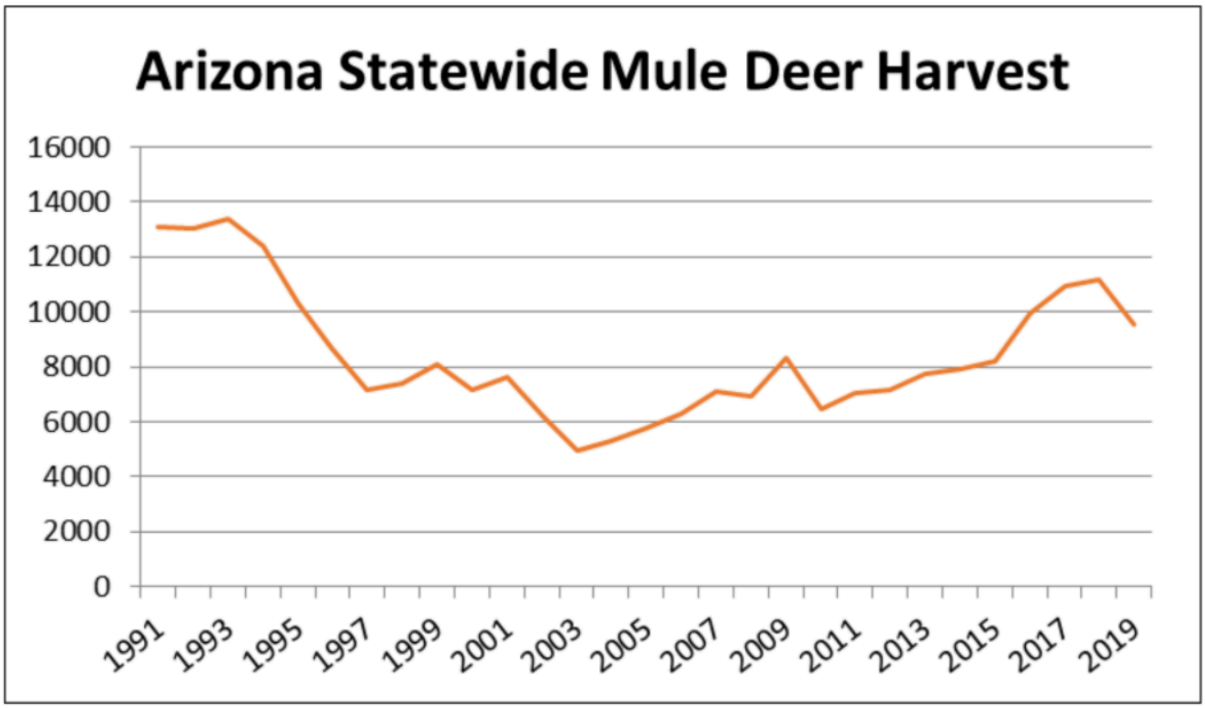
“In 2017, 10,964 mule deer were harvested, representing a 10% increase in harvest from 2016, a 136% increase from the historic low point in 2003, but still only 63% of the 1986 peak harvest of 17,413. Population parameters indicate the statewide population continues to gradually increase.”

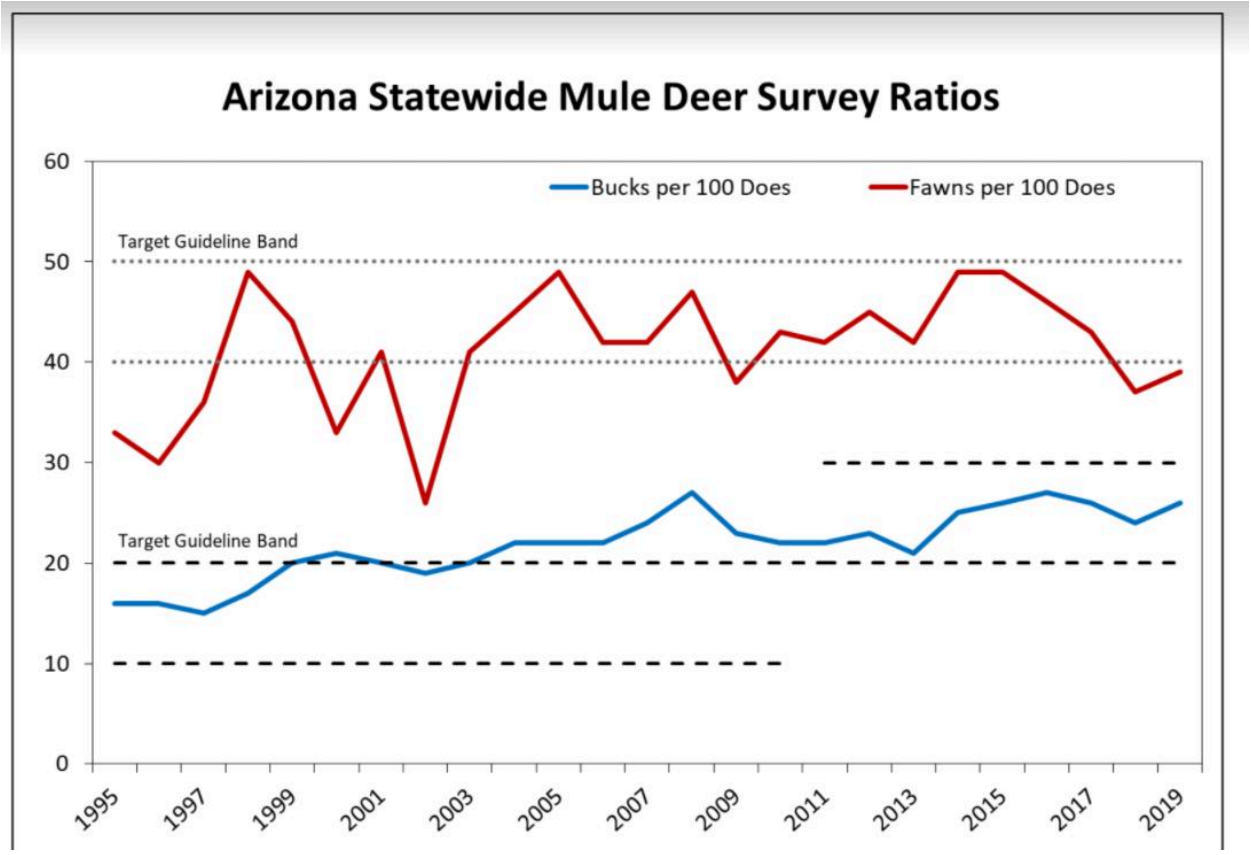
From 2019 below

“Mule deer populations reached the most recent peak in the mid-1980s. Mule deer declined through 2000 and since then have increased gradually. Population parameters indicate the statewide populations are stable and some slightly declining.

From 2020 below

“Population parameters indicate the statewide populations are stable in most game management units; there a few game management units that have declining populations… Buck:doe ratios for mule deer were managed at 20–30 per 100 and currently the statewide average is 26.





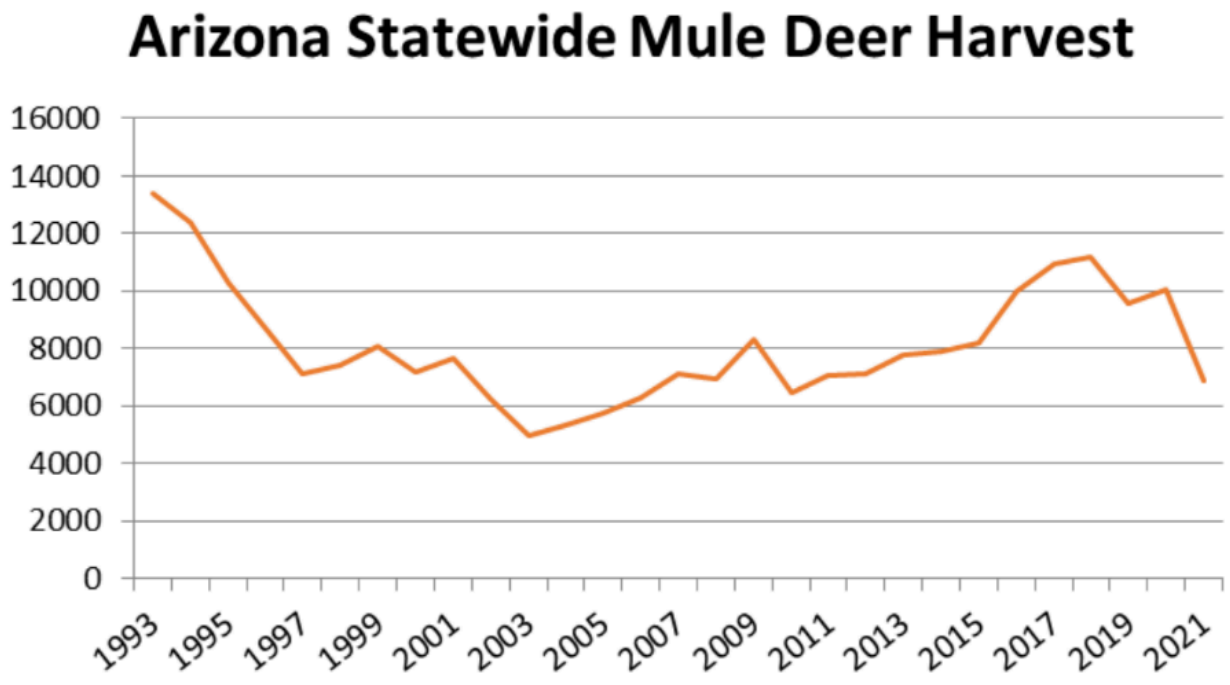
From 2021 below

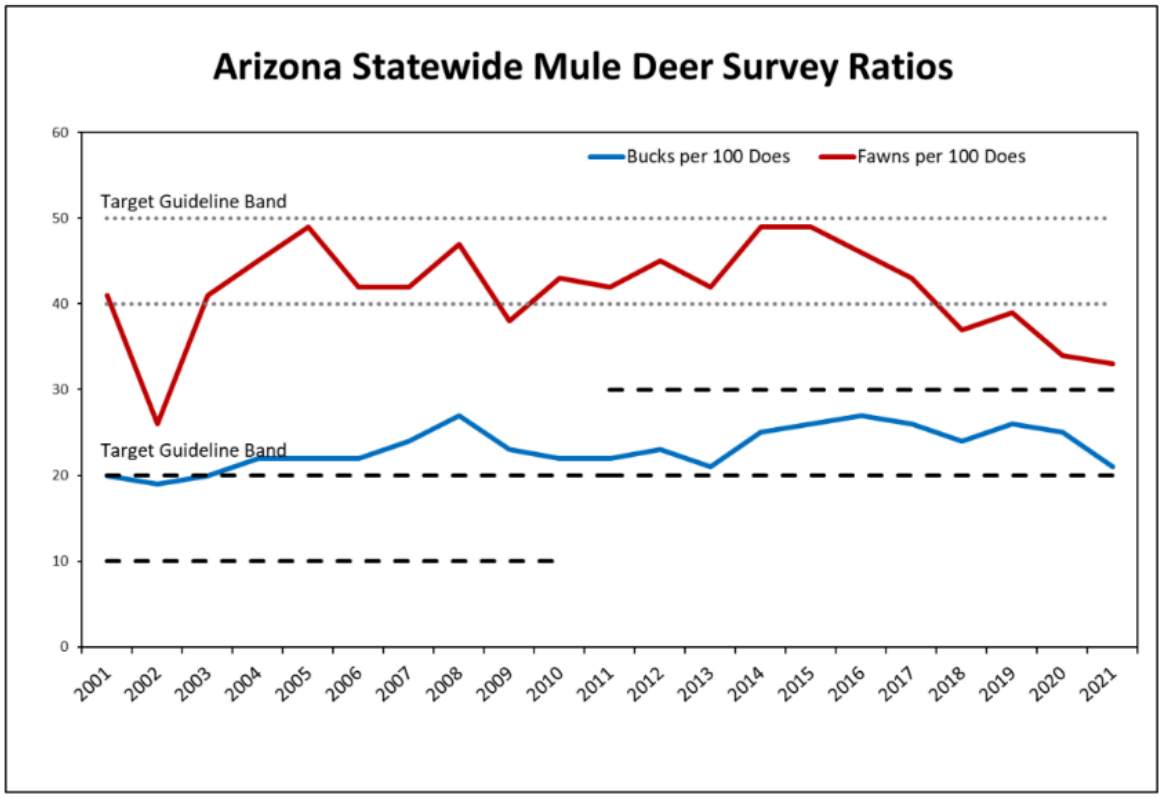
“In 2020, 10,356 mule deer were harvested (all methods of take). Population parameters indicate the statewide populations are stable to declining in most game management units; drought conditions are impacting recruitment… Buck:doe ratios for mule deer were managed at 20–30 per 100 and currently the statewide average is 25.”

From 2022 below

In 2021, 6,869 mule deer were harvested (all methods of take). Population parameters indicate the statewide populations are declining in most game management units; drought conditions are impacting recruitment. Most deer populations within the state are surveyed every other year using helicopter or fixed-wing aircraft; however, due to the severe environmental conditions that Arizona is experiencing, supplemental ground aerial surveys are being conducted in off years to monitor population ratios and general population health.

Buck:doe ratios for mule deer were managed at 20–30 per 100 and currently the statewide average is 21. Alternative management units were managed at higher buck:doe ratios with added guidelines regarding the age structure of the harvest or hunter density. These units equal about 5% of the opportunity offered annually. The statewide number of fawns per 100 does is 33 which is below management guidelines (40-50) and has been trending down since 2016. Significant harvest reductions were recommended for the 2021 and 2022 deer hunts;





-Amber Munig, Arizona Game and Fish Department

The post-hunt 2009 mule deer population was estimated at 75,000 to 80,000 [see p. 6, Hunt Arizona 2012], the white-tailed population was estimated at 70,000 to 75,000 for about 150,000.

From 2023

Population parameters indicate the statewide populations are declining in most game management units; drought conditions are impacting recruitment.

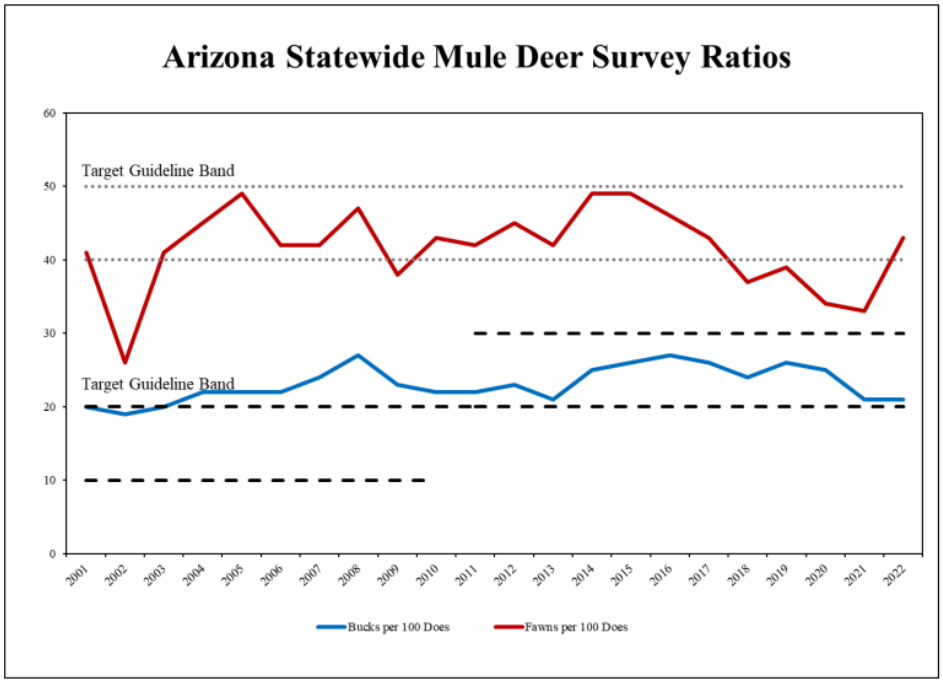


Figure 1. Statewide Mule deer buck to doe and fawn to doe ratios in Arizona from 2001-2022. Guidelines for buck to doe ratios target between 20-30 bucks per 100 does. Guidelines for fawn to doe ratios target between 40-50 fawns per 100 does.

-Callie Hartson-Cavalcant, Arizona Game and Fish Department

From 2024 WAFWA

“In 2023, 7,780 mule deer were harvested (all methods of take). Population parameters indicate the statewide populations are declining in most game management units; drought conditions are impacting recruitment.” page 6

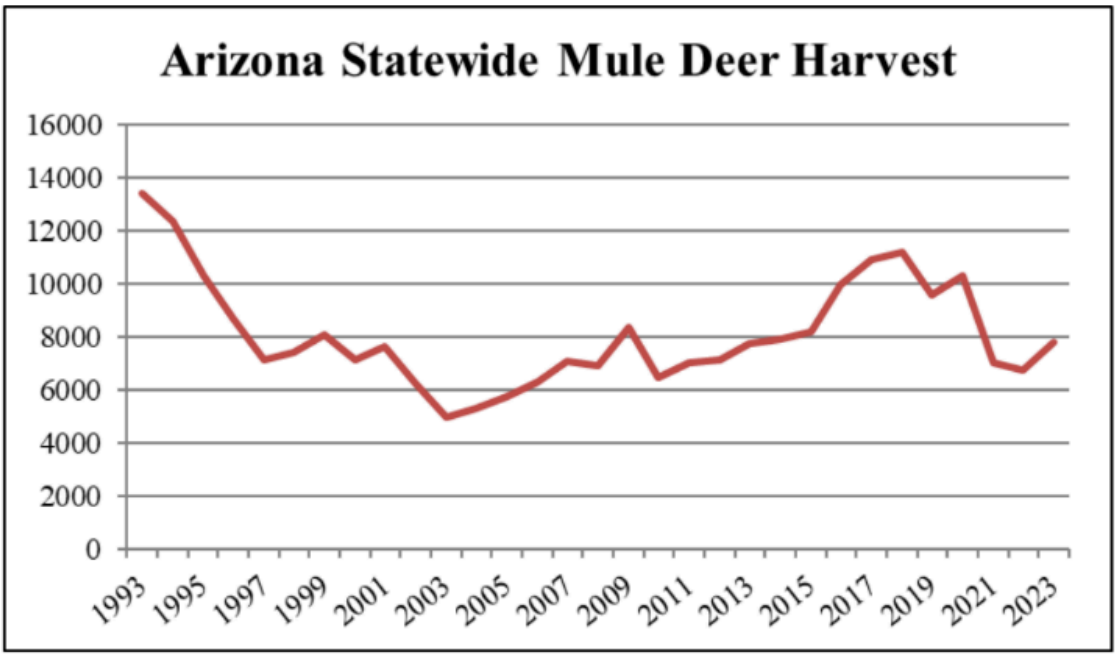


Figure 1. Statewide Mule deer harvest estimates in Arizona from 1993-2023.