Oregon Deer Hunting Stats 1952-2011

ANALYSIS BY IAN HILGART MARTISZUS

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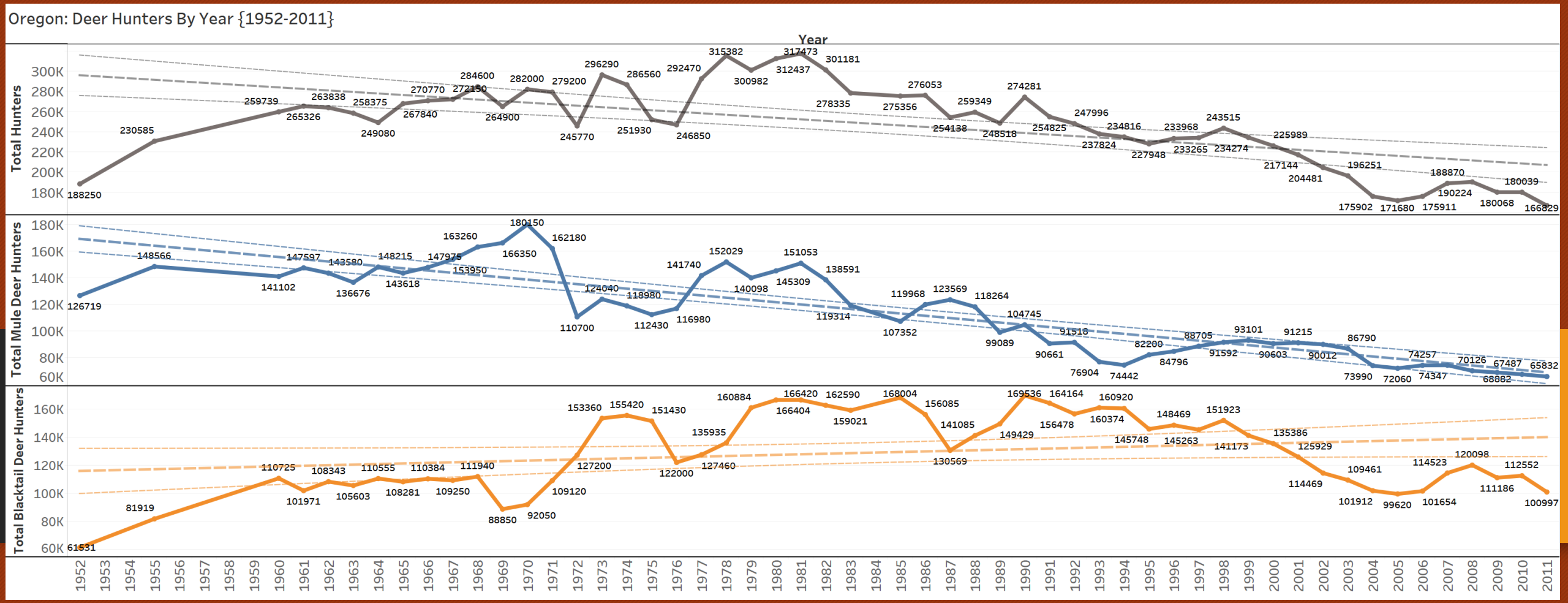
Background

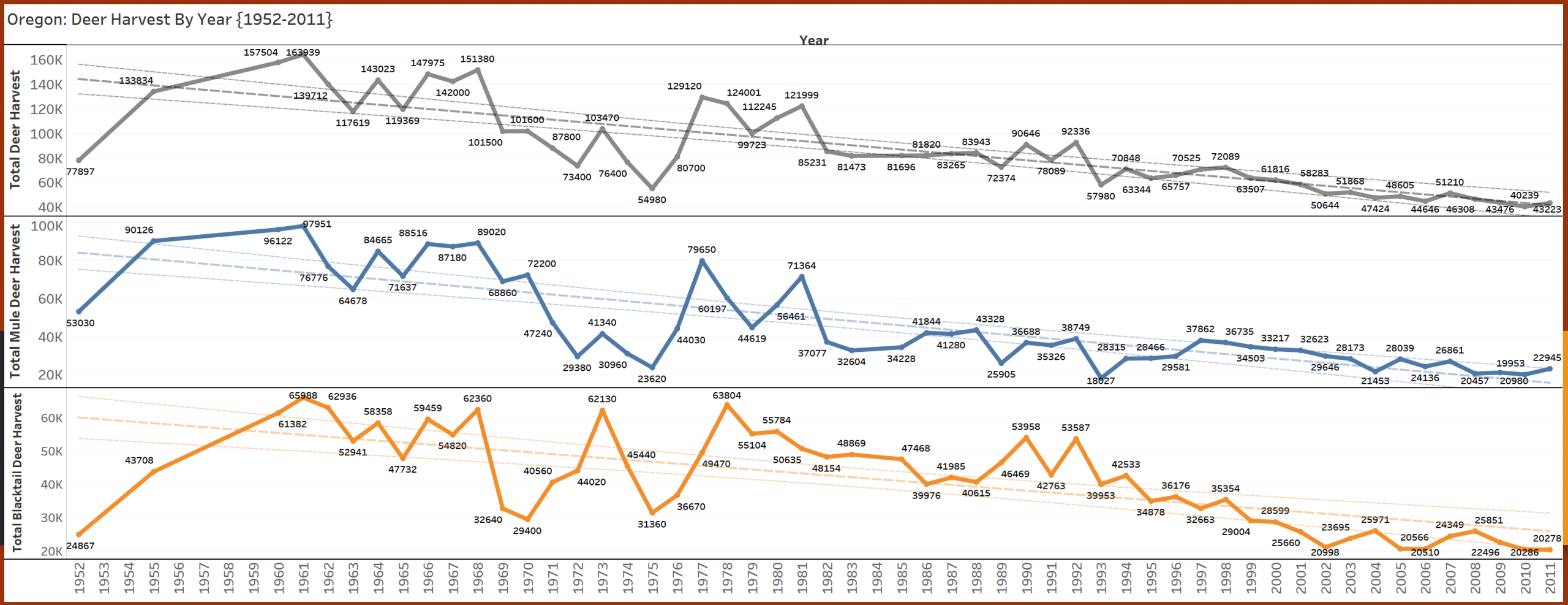
- Data Source: Oregon Department of Fish and Game Deer Hunting Statistics 1952-2011 (https://www.dfw.state.or.us/resources/hunting/big_game/controlled_hunts/docs/hunt_statistics/12/DEER_Hunting_Trends_2012.pdf)

- Trend lines that appear in the dataset represent the line of best fit and the 1st standard deviation across 58 years of data. In 1984 no data was collected.

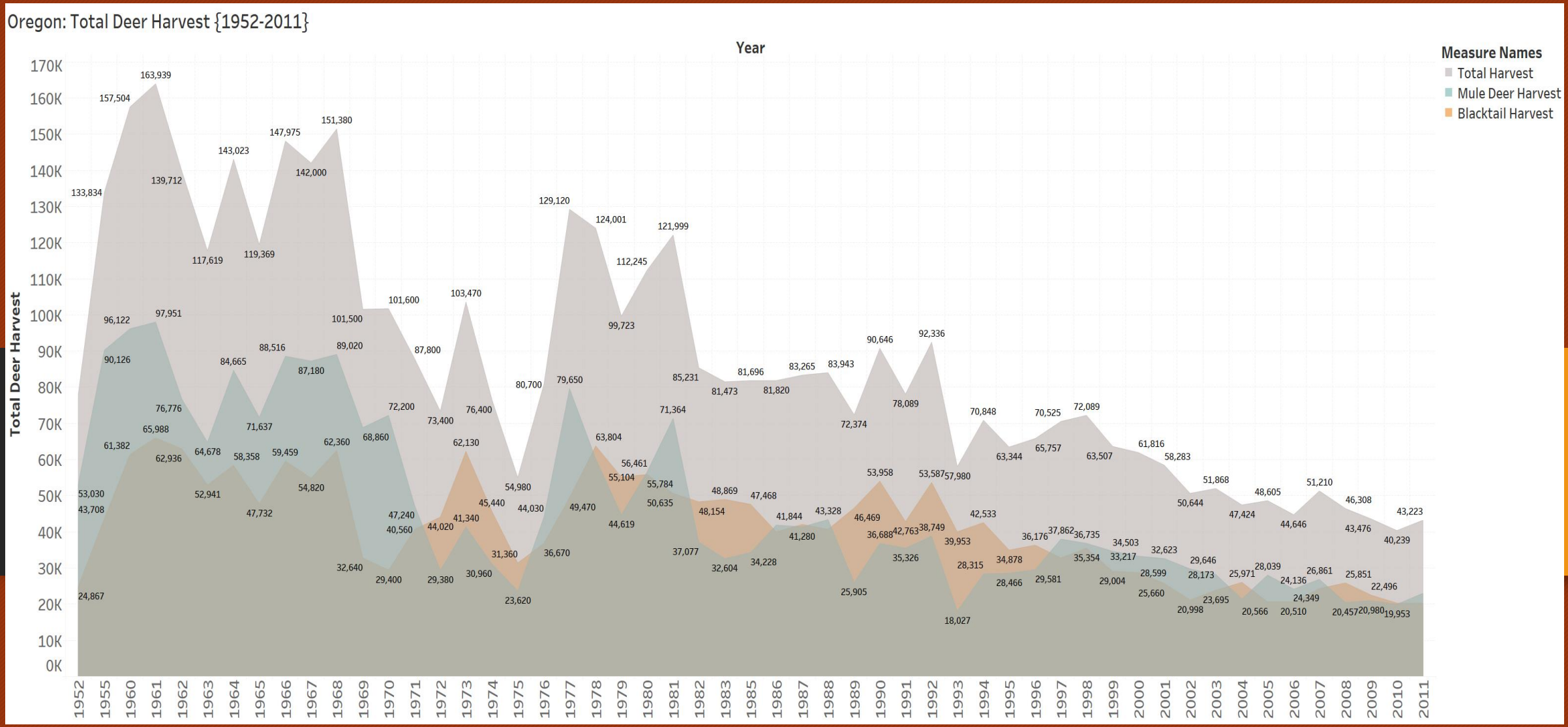
- Note: The Oregon Department of Fish and Wildlife significantly changed formats for post-2011 data. Once I've restructured the fresher data I will update the analysis.



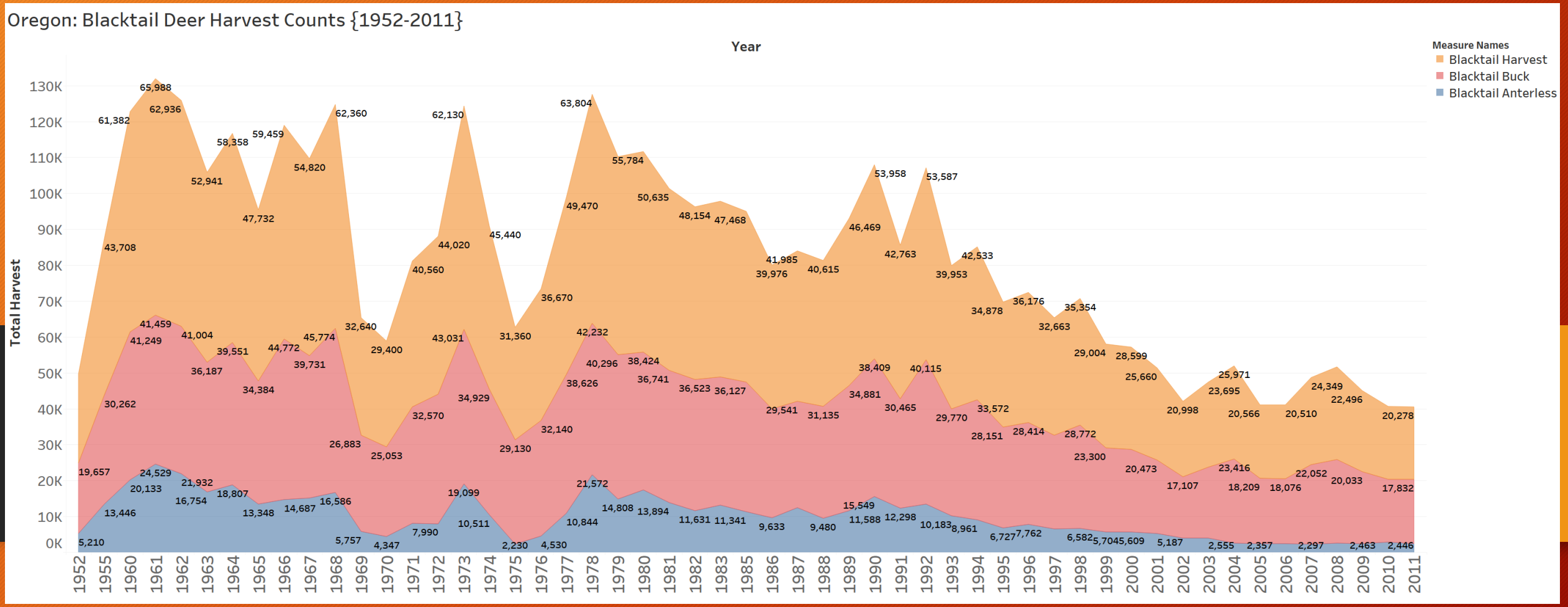
- Deer hunter numbers are declining in Oregon. The decline is most dramatic in mule deer hunters.
- The Blacktail deer hunter trend appears to have a positive slope but this is due to very low numbers early in the data set. In reality, the number of Blacktail deer hunters has been steadily declining since 1990.



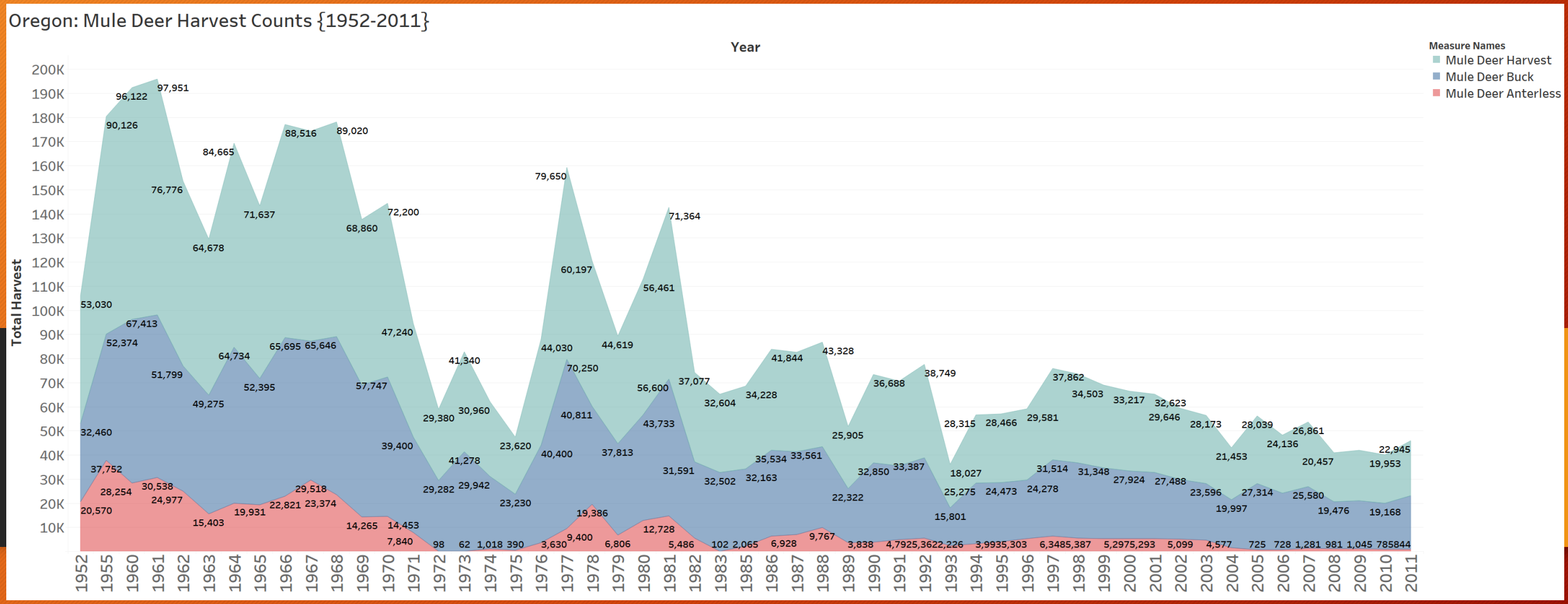
- There has been a substantial decline in Oregon deer harvest for both species of deer.



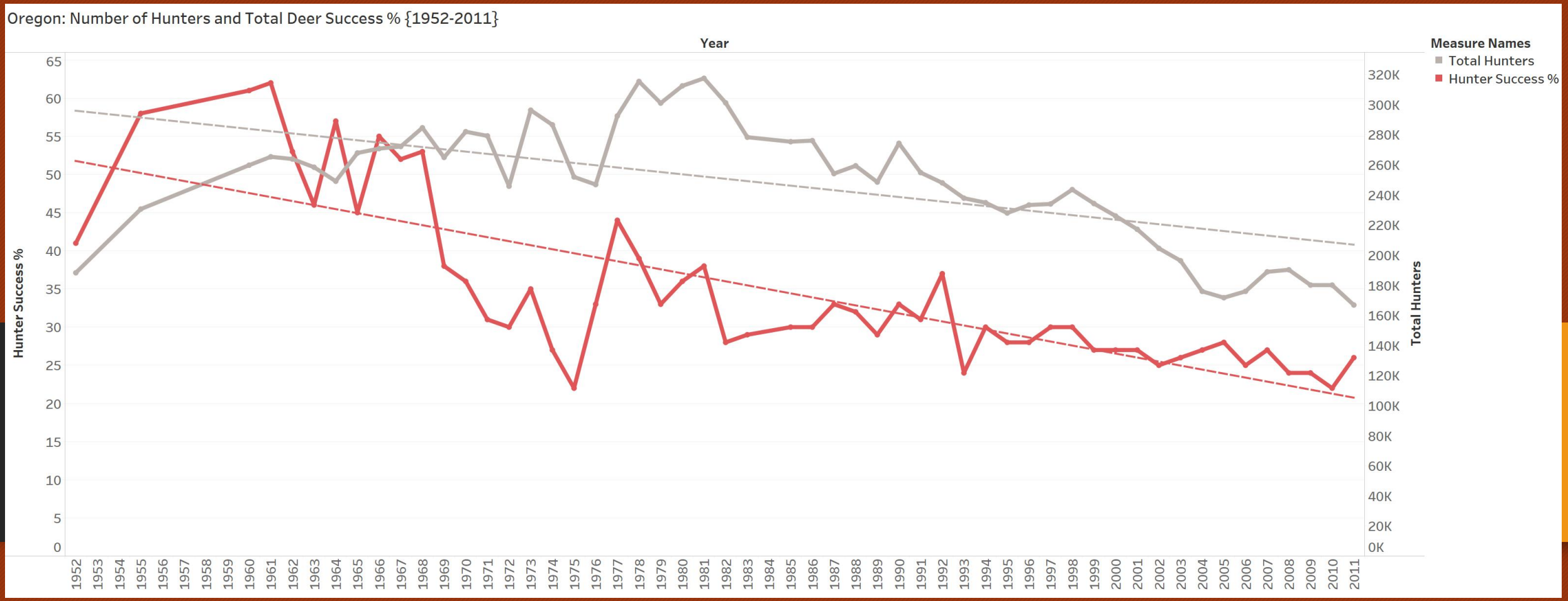
- 2010 had the lowest deer harvest in the data set. Total harvest was 25% of the peak (1961).
- The Mule deer harvest low point was in 1993 and was 18% of peak harvest (1961).
- The Blacktail deer harvest low point was in 2011 and was 30% of peak harvest (1961).



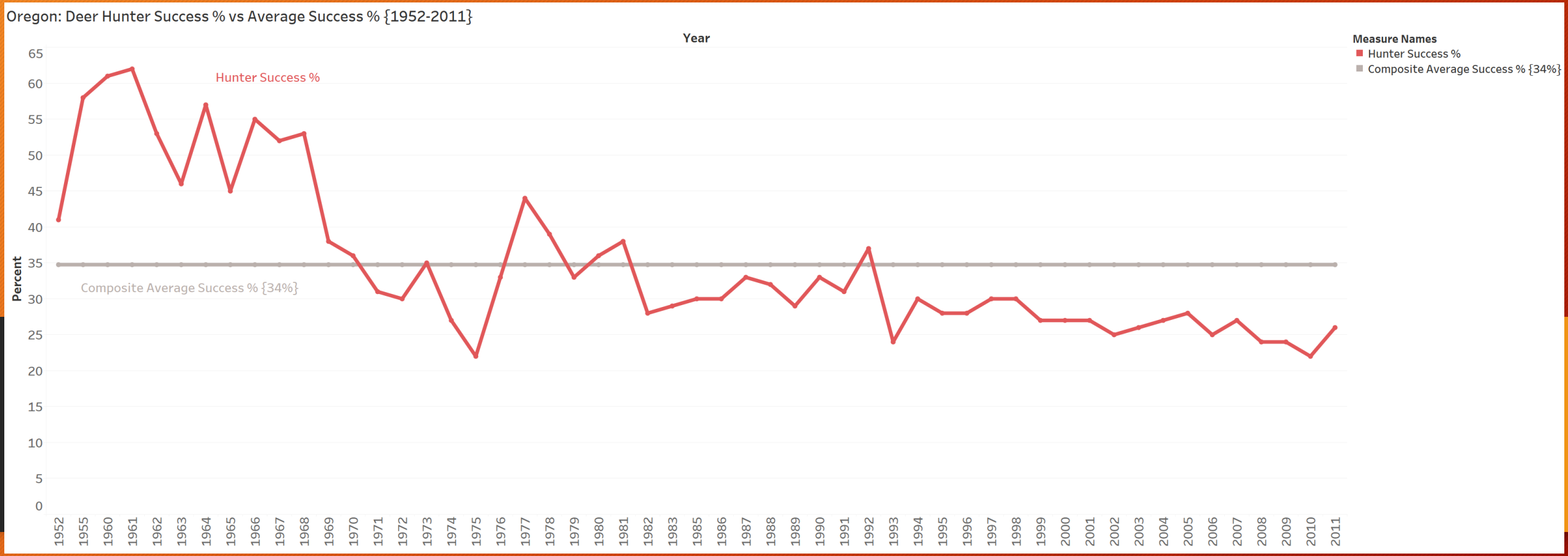
- Both buck and antlerless Blacktail deer harvests have declined over time.
- The decline in Blacktail deer harvest does not appear to be due to, or buffered by, an increased amount of antlerless deer harvest.



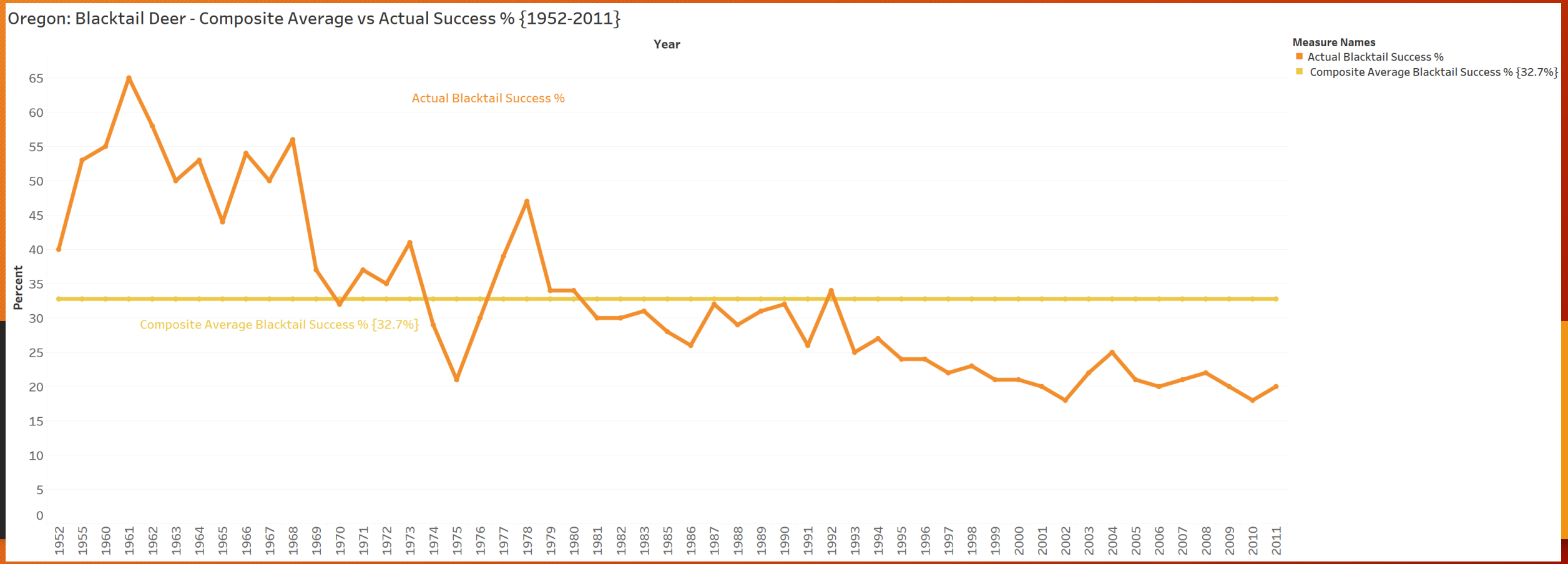
- Mule deer buck and antlerless harvests have also declined over time.
- The antlerless harvest of Mule deer is far lower than antlerless Blacktail harvest but the Mule deer and Blacktail deer overall harvests are similar (20.2k Blacktail and 22.9k Mule deer in 2011).



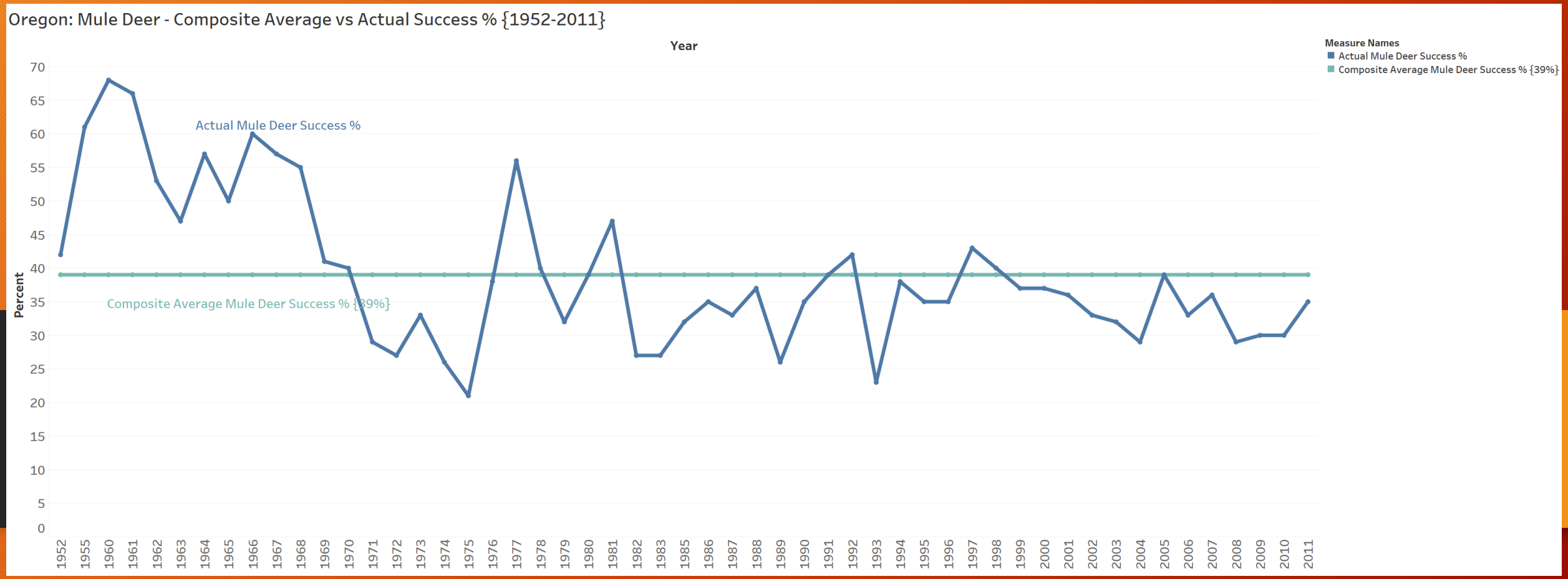
- Deer hunter success rate is declining more rapidly than deer hunter numbers.



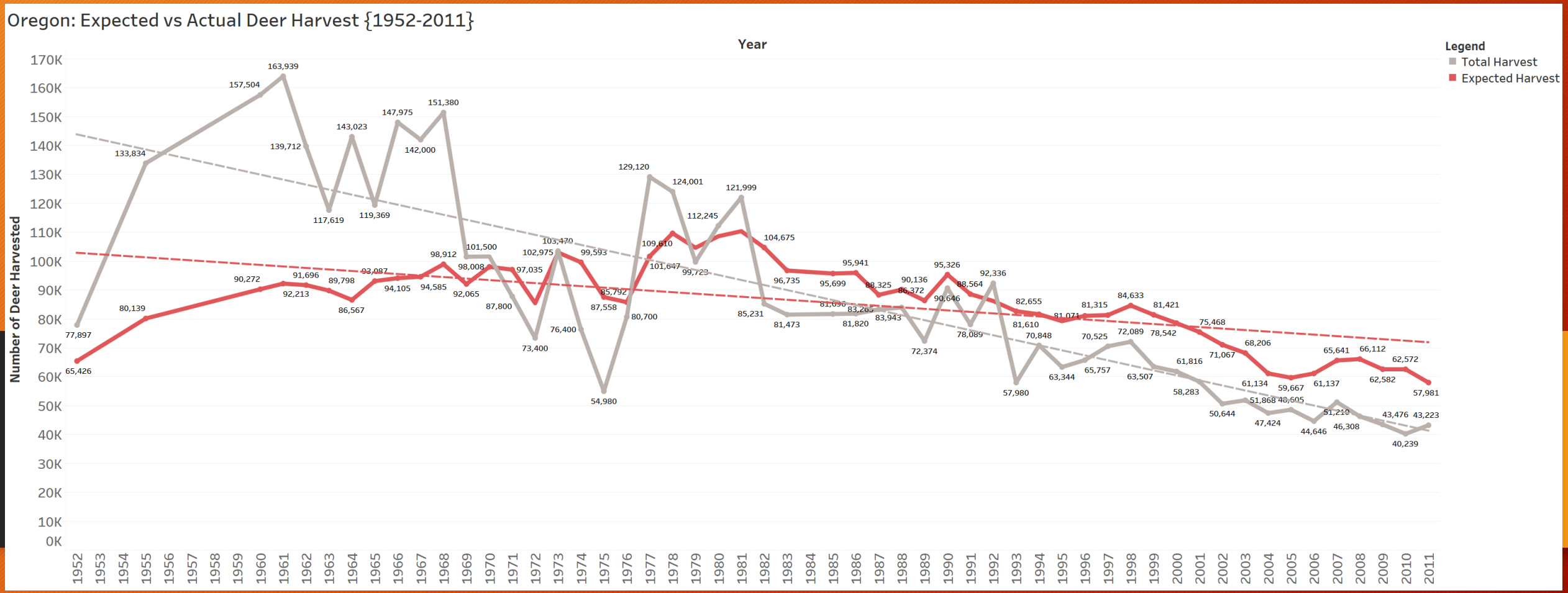
- The yearly deer hunter success rate is declining and has been below the composite average since 1992. *Composite average is calculated by averaging the success rate of all 58 years of data (1984 data was not collected).
- Since 1981, deer hunters have only beat the data set average once (1992).
- This indicates that the average hunter success rate from 1952-2011 is propped up by higher success rates early in the data set.



- Yearly Blacktail hunter success rates are declining and since 1992 they have been below the Blacktail data set composite average.



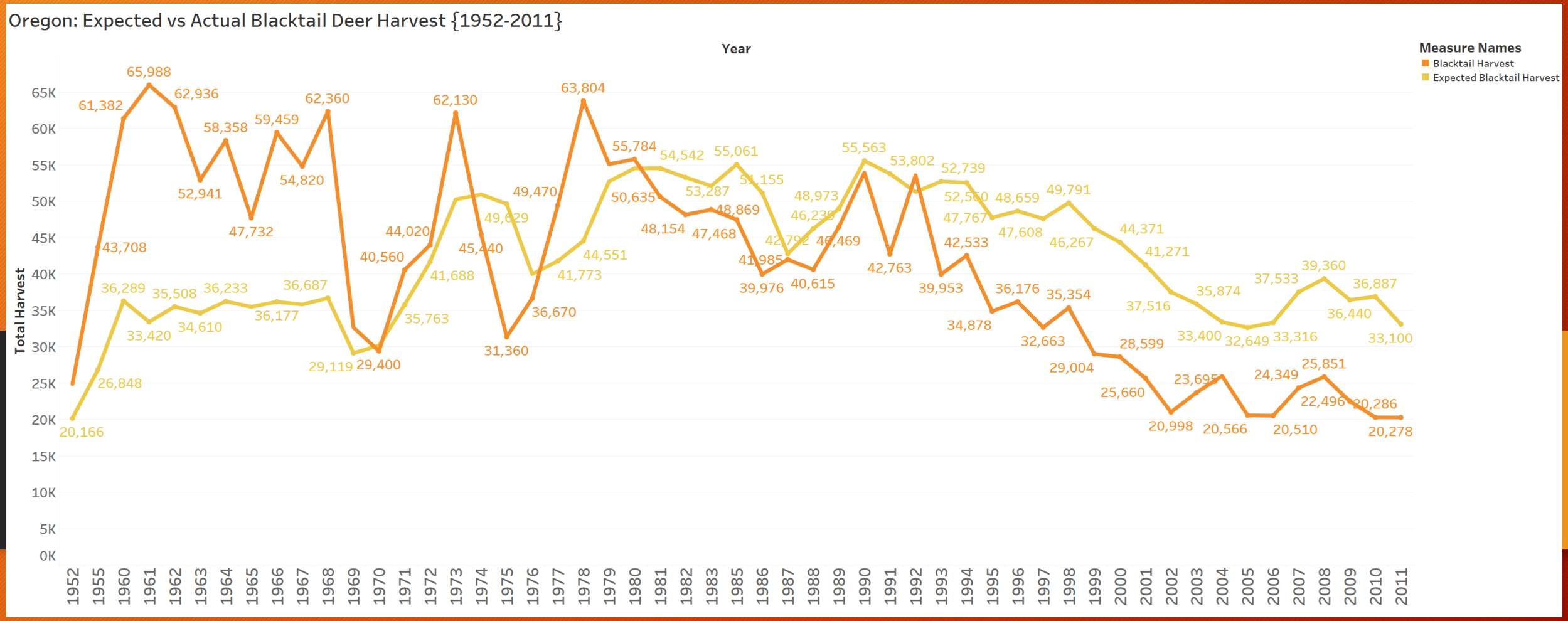
- Mule Deer hunter success rates are also declining and have been below the Mule deer composite average since 2005. Although this decline is not as significant as the drop in Blacktail success rates.



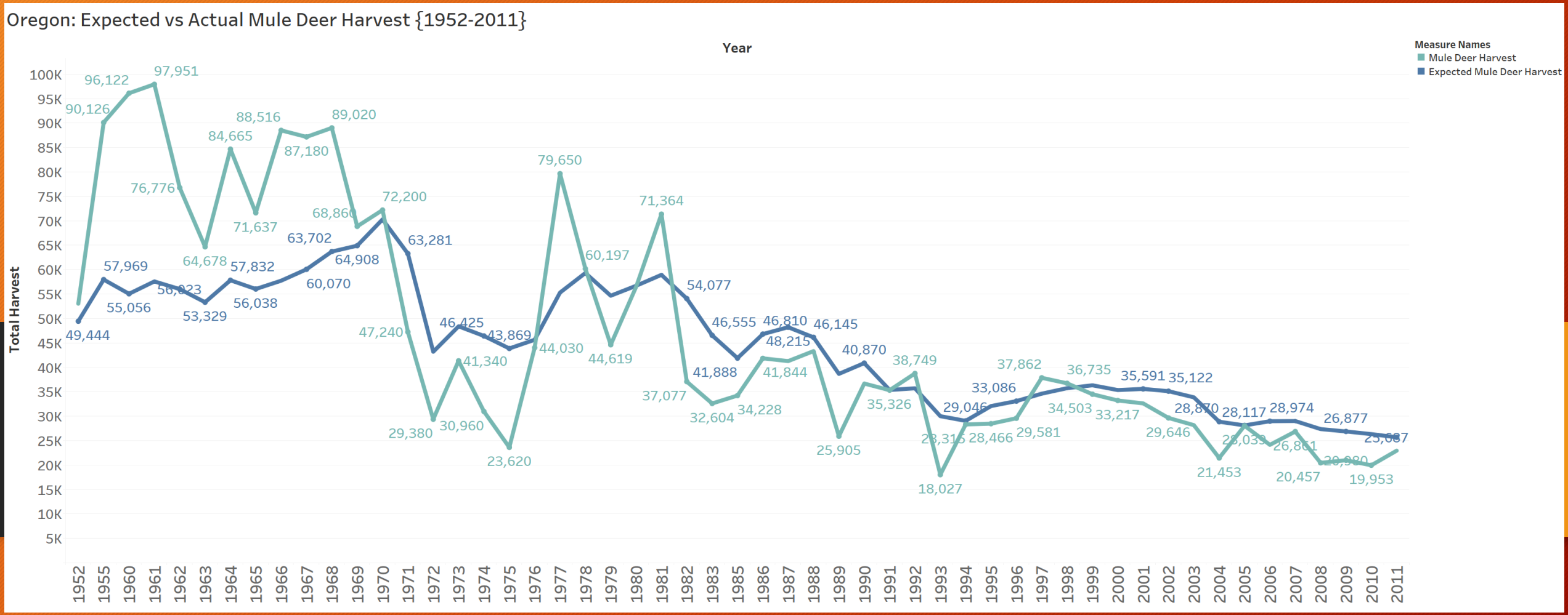
- Harvest declines are unsurprising when hunter numbers are dropping. But are total deer harvests declining faster than expected?

- To address this question we calculate an expected harvest, then compare it to the actual (total) harvest with this formula: (Composite average success rate ratio) x (Number of Hunters) = Expected harvest.

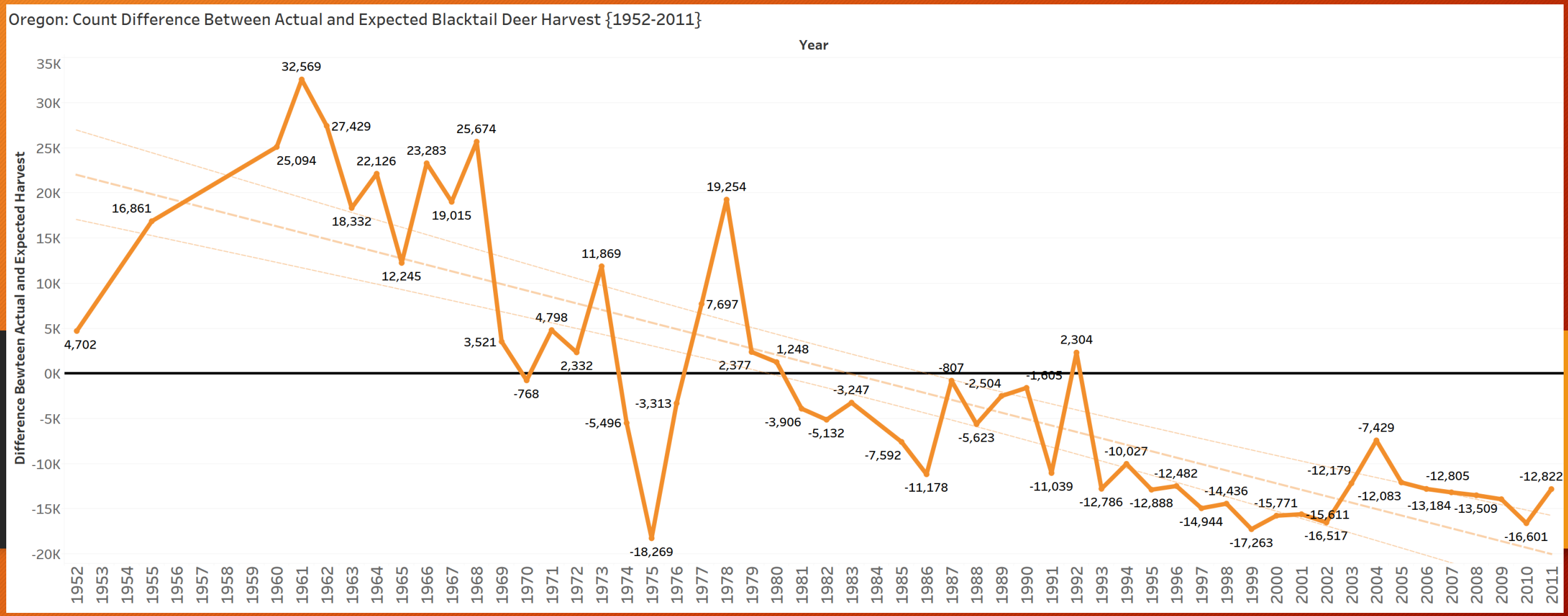
- The comparison indicates that the actual harvest is below our expected harvest and the trend lines indicate that the difference is accelerating.



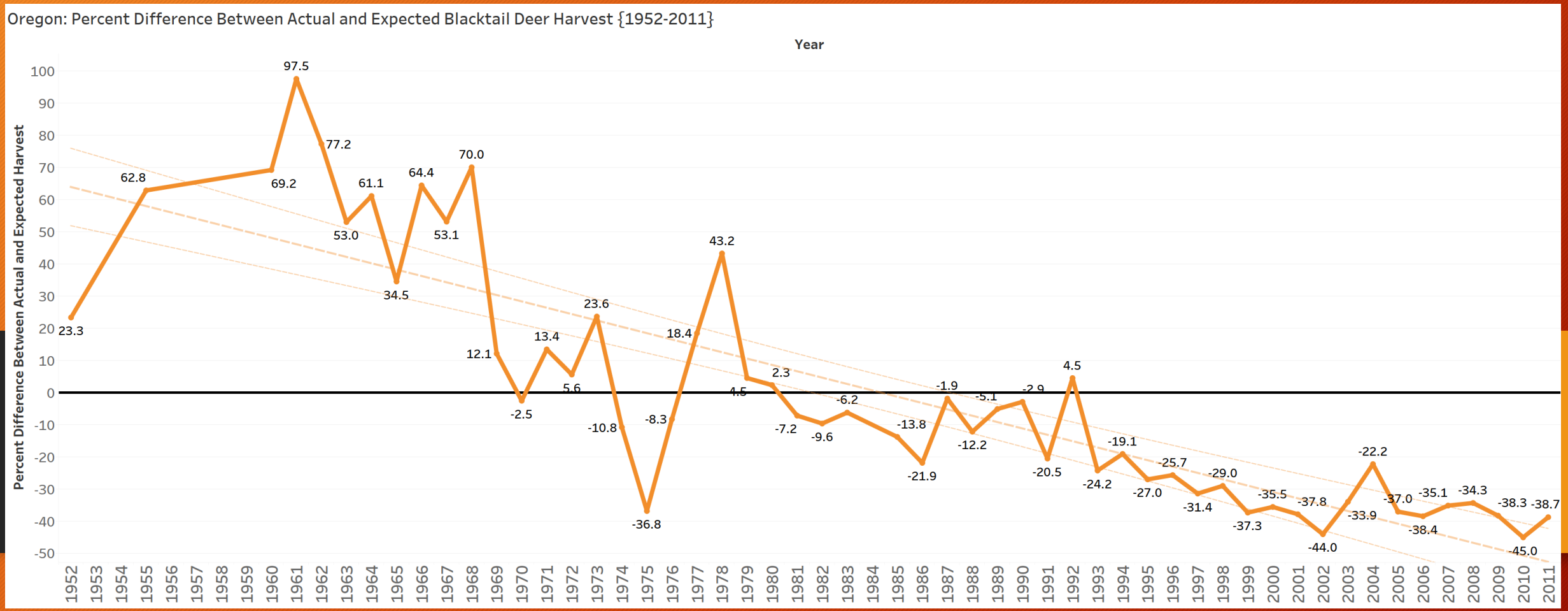
- When we apply our expected harvest formula to the Blacktail data, we see that the actual Blacktail harvest is drifting below our expected harvest. The last year that the actual harvest was greater than the expected harvest was 1992.



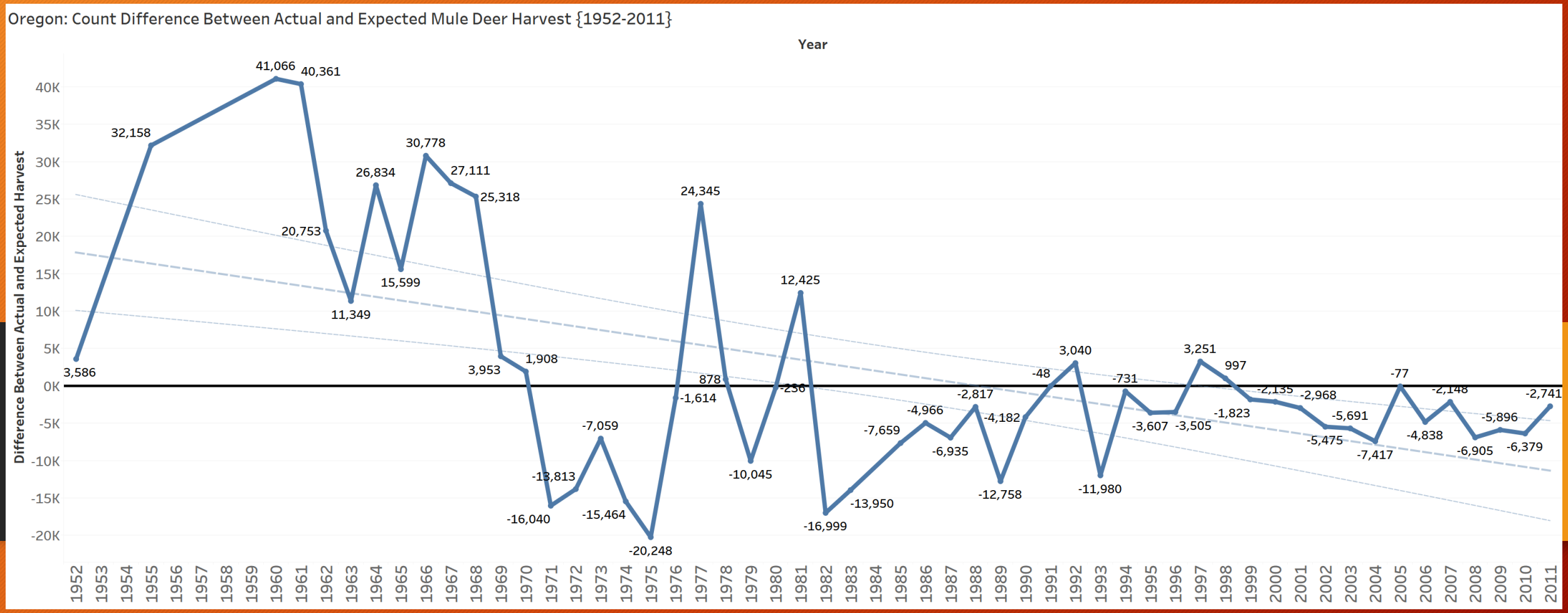
- The Mule deer actual harvest is below the expected harvest but this difference is less pronounced than what we see with Blacktail deer.



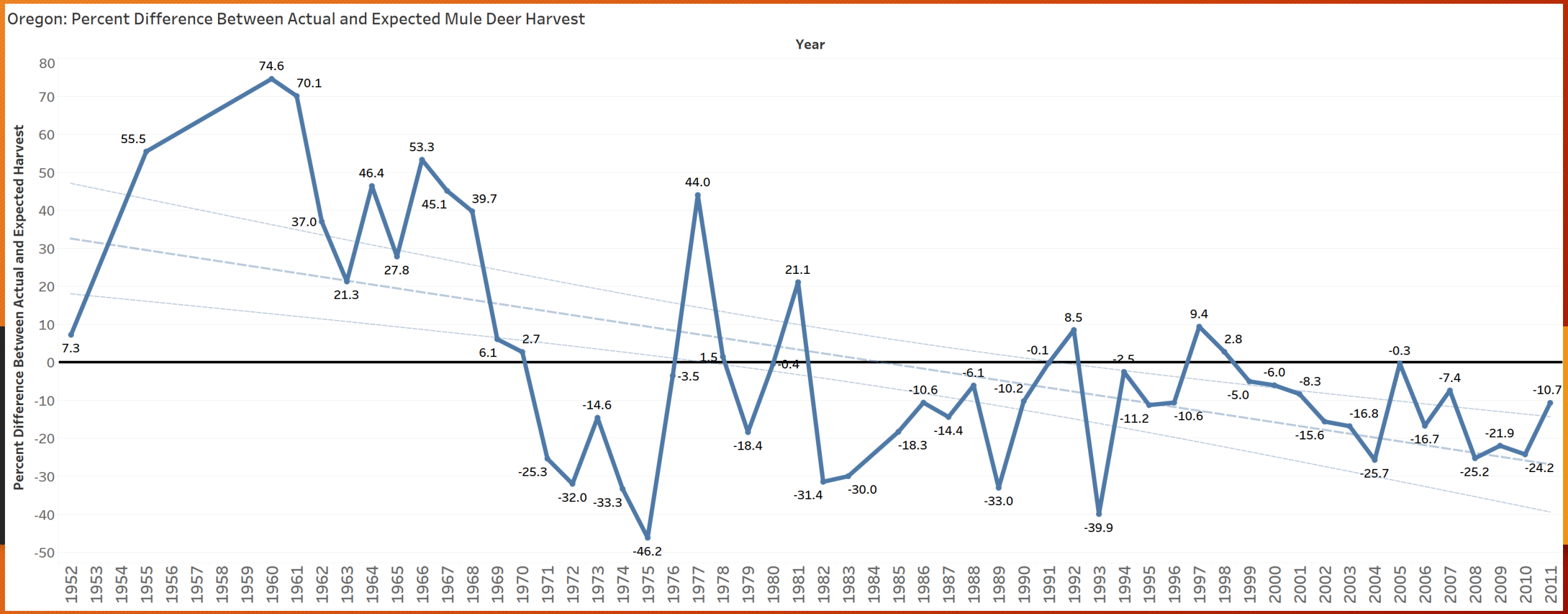
- From 1993 to 2011 the Blacktail deer harvest difference (Actual Harvest – Expected Harvest) has a negative value.
- In the 1993-2011 time period, there have been 257,280 fewer Blacktails harvested than we would expect based on the 58 year average harvest rate.



- If we look at the difference between expected and actual Blacktail deer harvest as a percentage, then we see that we were harvesting about 35%-40% less Blacktails than we anticipate based on the 58 year average success rate.



- Mule Deer harvest differences (Actual Harvest – Expected Harvest) did not decline as rapidly as Blacktail deer.
- Despite the improved situation compared to Blacktails, Mule Deer harvest differences are also down.



- From 2008 to 2011, Mule Deer hunters harvested 10%-25% fewer deer than would be expected from the 58 year average success rate.

Conclusions

- Oregon deer hunter numbers are declining and this is accompanied by a decline in deer harvest numbers.
- While success rates for Mule deer hunters are better than Blacktail hunters, success rates for both hunter groups are declining.
- Blacktail harvests have seen the greatest drop and over the last 3 years of available data, Blacktail hunters harvested 35%-40% less deer than the 58 year average harvest rate suggests that they would harvest.
- Because of the decline in hunter success rates, it does not appear that the decreased deer harvest can be explained by fewer deer hunters.
- There is sufficient evidence to suspect that declining deer harvest rates are due to factors unrelated deer hunting.

Questions?

- If you have questions about the data, methodology, conclusions, or if you have other analysis ideas, then contact me via email at: hilgarti@gmail.com