

# **NW12 - 5 Years of Data under APR's**

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With the recent compilation of data in the 2017 Michigan Annual Hunter Survey, we now have 5 full years of data for the NW12 Counties, where Mandatory APR's have been in place since 2013.

We examined 3 metrics, Hunter retention, Antlerless harvest and Antlered harvest. For comparison purposes, we used 8 NLP counties primarily adjacent to the NW12, which did not have Mandatory APR's on the unrestricted tag during this time period. We did not include any of the NLP counties which have been under either Hunters Choice regulations or other harvest regulations specific to the NELP TB zone.

We used two different approaches for this analysis.

For the first comparison, we utilized a 3 year pre-APR baseline period (2010 - 2012) and then compared that pre-APR baseline average to 5 years of data under APR's in the NW12 (2013 - 2017) averaged. Figures 1, 2 & 3 show the percentage change that occurred in both the NW12 and the non-APR 8 counties, during the APR period.

In the second comparison, we looked only at the trends that have occurred in both the NW12 and the non-APR 8 counties during the 5 year period that APR's were in place in the NW12 (2013 - 2017). The metrics that we examined in the second comparison were Antlerless and Antlered harvest (Figures 4 & 5)

When comparing the data on a county by county basis, it quickly becomes apparent that there is no evidence, based on this data, that Mandatory APR's had a driving effect, either positively or negatively, on either Hunter retention or Antlerless harvest. The data indicated that APR's may contribute to decreases in Antlered harvest.

For the first two metrics examined, Hunter retention & Antlerless harvest, each of the two groups of counties had some counties which showed positive changes and some which showed negative changes. Antlered harvest showed more uniform results for each of the two zones, indicating that APR's may play a role in decreasing Antlered harvest.

If the premise is that APR's will result in greater Hunter retention or increased Antlerless harvest, then there would need to be a clear difference resulting in those counties which had the regulations compared to those counties which did not.

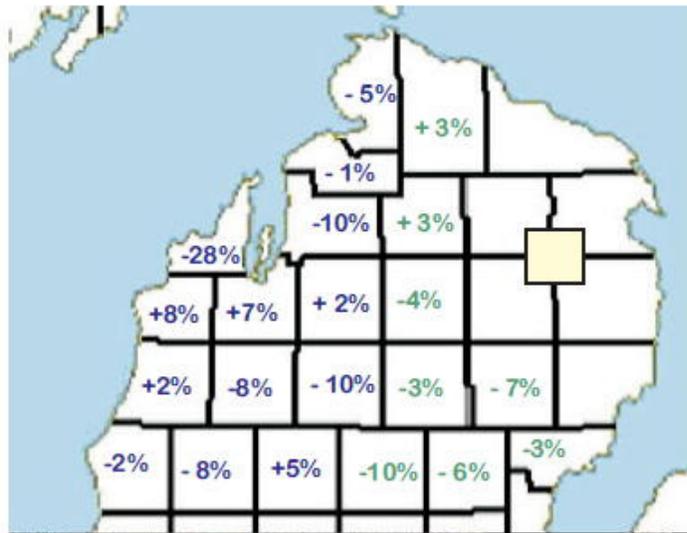
That did not happen. Instead, there was significant variation for 2 of the 3 metrics in both of the sets of counties.

These results contradict the premise that APR's will result in predictable changes for Hunter retention or Antlerless harvest, although they may suppress Antlered harvest.

These findings provide critical insight in light of the fact that APR's have been proposed as part of CWD management regulations that are currently being considered. The data from the NW12 indicates that Mandatory APR's have had no influence on Hunter retention or Antlerless harvest rates and also indicate that they may suppress Antlered harvest, which could have a negative impact on disease mitigation efforts.

## Hunter Retention -

### NLP Hunter participation trends



Change in hunter numbers since  
APR's were enacted in the NW12

Counties in Blue - APRs  
Counties in Green - Non -APR

Comparison of average of NW12 APR period to 3 year pre-APR baseline.  
Data compiled from MDNR annual hunter survey reports 2010 - 2017.

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Figure 1

As Figure 1 indicates, during the 5 years that Mandatory APR's were in place, 5 of the counties in the NW12 experienced increases Hunter retention and 7 experienced decreases. 2 of the 8 non-APR counties experienced increases, while 6 experienced decreases. Leelanau Co., which has had Mandatory APR's since 2003, experienced the highest level of decrease, during the 5 year period from 2013 - 2017. It is likely that the loss experienced by Leelanau Co. contributed partially to some of the increases which occurred during that period in the adjacent Benzie and Grand Traverse counties.

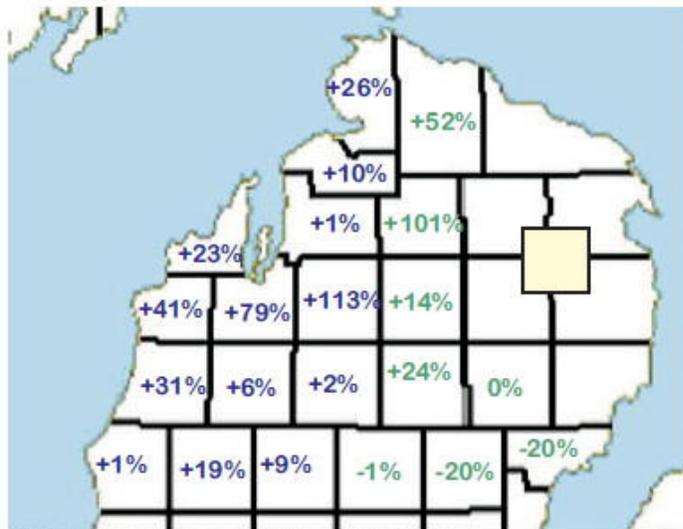
If APR's are presumed to be the cause of the 8% increase in Benzie, the 7% increase in Grand Traverse and the 5% increase in Osceola counties, then they must also be presumed to be the cause of the 10% decrease in hunter participation in Antrim & Missaukee counties. Conversely, if the lack of Mandatory APR's is to be blamed for the 10% decrease in Clare county, then the lack of APR's must also be presumed to be the cause of the 3% increase in Cheboygan and Otsego Counties.

Clearly, there are a variety of other forces which drive hunter participation, which is why there is substantial variability in the data indicated but it's also abundantly clear that the presence or absence of Mandatory APR's showed no clear impact on whether hunters were retained, in the counties examined during the 5 year period that they were in place in the NW12.

## Antlerless Harvest

There have been a number of claims made by certain stakeholder groups, suggesting that implementing Mandatory APR's will result in increased Antlerless harvest.

### NLP Antlerless Harvest trends



Change in Antlerless harvest since  
APR's were enacted in the NW12

Countries in Blue - APRs  
Countries in Green - Non -APR

Comparison of average of NW12 APR period to 3 year pre-APR baseline.  
Data compiled from MDNR annual hunter survey reports 2010 - 2017.

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Figure 2

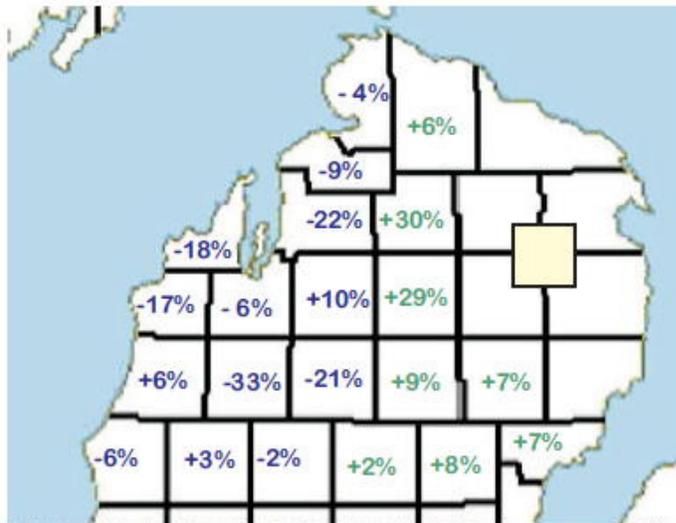
Figure 2 indicates that while all of the counties in the NW12 experienced an increase in Antlerless harvest during the 5 years that Mandatory APR's were in place, it also indicates that most of the non-APR counties also showed increases in Antlerless harvest. Antlerless licenses were previously limited in many of these counties and were liberalized concurrently with the implementation of APR's. The amount of variability that occurred between adjacent counties would suggest that there are driving forces other than APR's, which caused these results. Why would a county (Antrim) with Mandatory APR's show a 1% increase, while adjacent Otsego county without APR's show a 101% increase, if APR's were the relevant factor? Why would Missaukee county show only a 2% increase with APR's, when adjacent Kalkaska county showed a 113% increase with the same APR's and adjacent Crawford county showed a 24% increase without APR's. Again, there is no clear pattern which would suggest that Mandatory APR's have any measurable impact on increasing levels of Antlerless harvest.

## Antlered Harvest

The last metric that we looked at was Antlered harvest. The claim made by the groups which sponsored these Mandatory APR's was that there would be a one year drop during the first year that the APR's were in place but that antlered harvest would rebound after that and would soon be back to pre-APR levels. If we are looking for a cause and effect

that can be attributed to APR's, one could argue that they did have an impact on Antlered harvest but not the one that was predicted by the Sponsoring Organizations.

### NLP Antlered Harvest trends



Change in Antlered Buck harvest since APR's were enacted in the NW12

Counties in Blue - APRs  
Counties in Green - Non -APR

Comparison of average of NW12 APR period to 3 year pre-APR baseline.  
Data compiled from MDNR annual hunter survey reports 2010 - 2017.

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Figure 3

After 5 years of data, 9 of the 12 NW12 Counties showed decreases in Antlered harvest, compared to the pre-APR baseline. In contrast, all 8 of the non-APR counties showed increases in antlered harvest during the same period, when compared to the baseline period. While that should not be considered definitive proof of an impact resulting from APR's, it certainly suggests that there may be a cause and effect resulting from these regulations.

### Trends occurring 2013 - 2017

We also compared the harvest trends for Antlered and Antlerless deer that occurred during the 5 years that APR's have been in place in the NW12, comparing the NW12 Counties to the non-APR 8 NLP Counties, which did not have Mandatory APR's in place on the unrestricted tag during that time period.

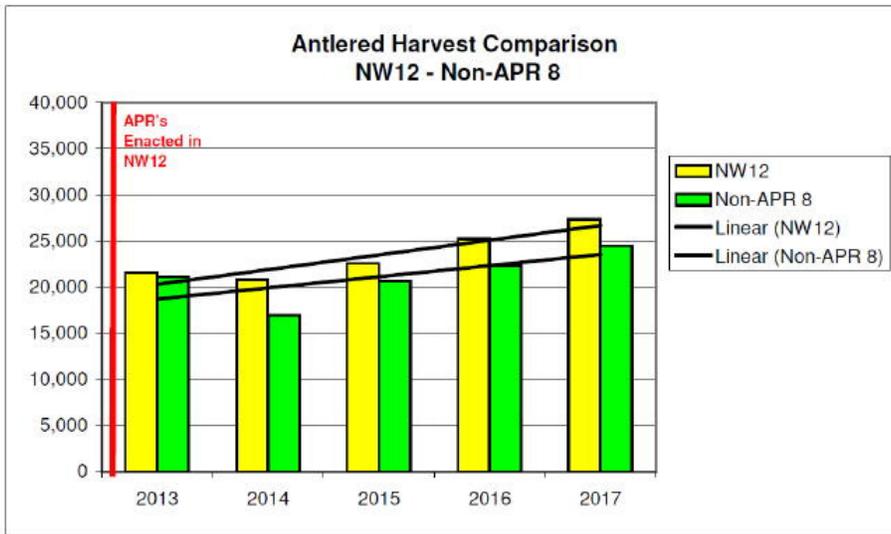


Figure 4

Figure 4 shows that there was a similar upward trend in Antlered harvest in both sets of counties during this time period. The NW12 counties had a slightly steeper upward trend.

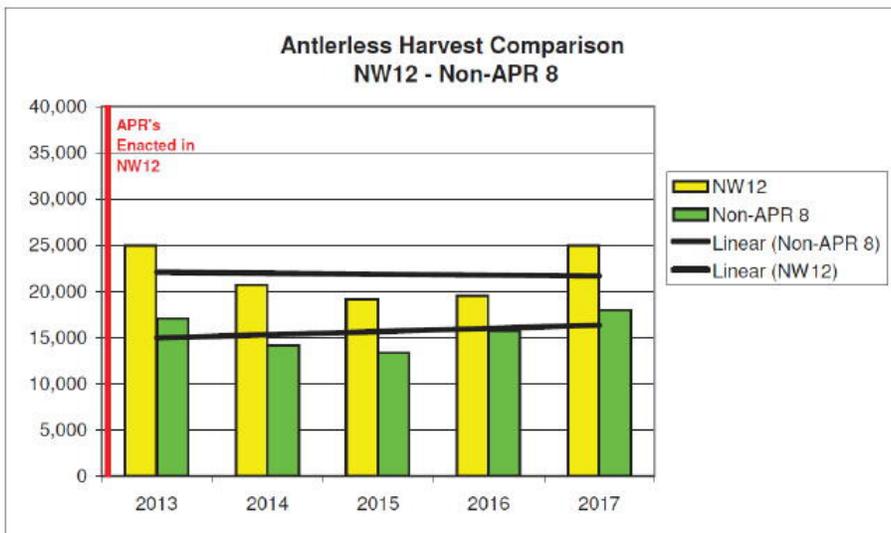


Figure 5

Figure 5 indicates a slightly decreasing trend in Antlerless harvest in the NW12 counties during this time period, while there was a slightly increasing upward trend in the non-APR Counties. This data contradicts the suggestion that enacting APR's in the CWD Management Zone would result in an increase in Antlerless harvest.

### Discussion

Aggregate totals are the result of adding together all of the data from each of the two sets of counties into individual totals for each group. They paint an incorrect picture of the actual impact of APR's. Last year, during the discussions about enacting APR's in the TB zone, the DNR suggested to the NRC that the NW12 data supported the premise that APR's would drive an increase in Antlerless harvest, which would be beneficial for disease control purposes. They did this by using aggregate totals from the NW12 compared to aggregate totals from other NLP counties. If APR's actually had an impact, it would be apparent when looking at the results on a county by county basis, as this analysis does.

The reason the aggregate totals give a false impression is that there are several counties in each group that have large hunter populations. If those particular counties show either an increase or a decrease, it tends to skew the results for the entire group of counties that they are included with.

Apparently, supporters of expanding APR's on a statewide basis, including in the CWD Management areas, are using the same arguments which were made last summer, despite the apparent impact of the aggregate totals being thoroughly debunked.

Unless the analysis is done on a county by county basis, it is unlikely to accurately reflect whether or not any impact actually results from Mandatory APR's. If these regulations are considered being implemented in disease zones, resulting from predictions made based on data from the NW12, it is vitally important that the data be examined on an individual county basis, not just aggregate totals, which provide a less than complete picture of what actually occurred in the NW12.