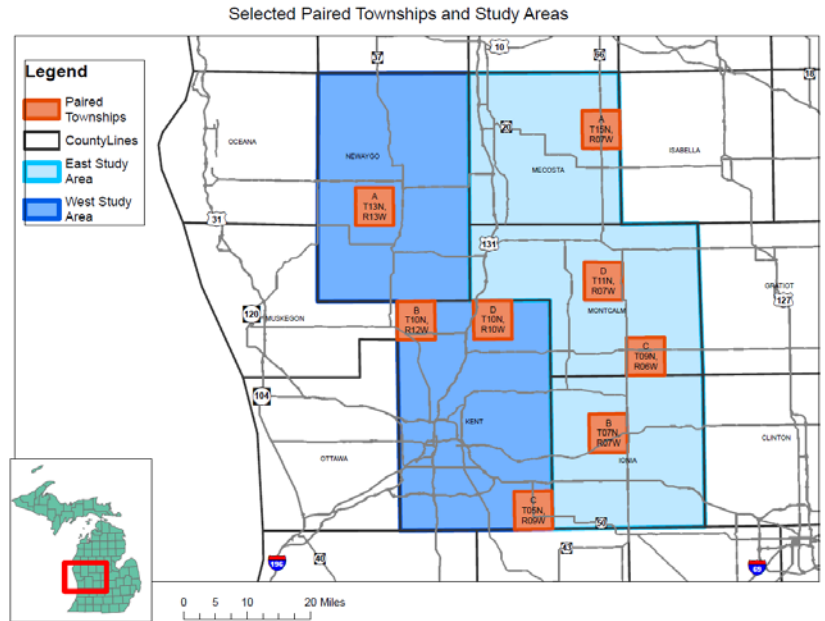


## Summary of the APR Field Study in the CWD Core Area

May 2019

In consultation with deer hunting stakeholder groups, the Natural Resource Commission (NRC) established a resolution requesting the Department of Natural Resources (DNR) to develop and conduct a research project to evaluate if mandatory antler point restriction (APR) regulations can be a useful tool in responding to the emergence of Chronic Wasting Disease (CWD) in Michigan deer. The current CWD management core area consisting of the five counties of Kent, Newaygo, Mecosta, Montcalm, and Ionia (hereafter referred to as 5-County) offers an opportunity to evaluate if APR regulations can influence deer population abundance and sex/age composition; factors that may contribute to the prevalence and spread of CWD.



Under the NRC resolution, the 5-counties have been set up as a CWD assessment area and the NRC is considering a mandatory APR beginning in the 2019 hunting season. The resolution calls for the NRC along with the Department to use the CWD assessment area to experimentally assess the effectiveness of APRs in assisting with management of CWD. The DNR Wildlife Division has partnered with the Boone and Crockett Quantitative Wildlife Center (QWC) at Michigan State University (MSU) to address this research question.

In consultation with DNR Wildlife Division Biologists and Researchers, the QWC developed a paired comparison of APR and non-APR areas in the 5-County area designed to detect changes in abundance and age/sex distributions over 4 years (2019-2022). The paired sample sites will be selected based on similar habitat, land uses, human density, and apparent/observed CWD prevalence across the APR and non-APR areas. Consequently, this design depends on regulations that split the 5-county area into two segments with APRs implemented in one of the segments and no APRs in the other. Given the need for controlling factors, the optimal split will be Kent and Newaygo counties in one segment with Mecosta, Montcalm, and Ionia being in the other (i.e., an east-west split to avoid variations in land cover/use, human, and deer populations that would occur with a north-south split).

Direct measures to detect change in the spread and prevalence of CWD resulting from APR regulations are unlikely during this study. The Department believes that detecting finite change in prevalence of CWD is beyond the present sampling capabilities using hunter-harvested deer. Additionally, other factors which cannot be accounted for in this study design could influence prevalence and spread of CWD (e.g., natural or human induced immigration of deer). The final product will be a predictive model of potential change in prevalence and spread of CWD under APR and non-APR regulations. These models will incorporate the estimates of deer abundance and sex/age composition derived from this study.

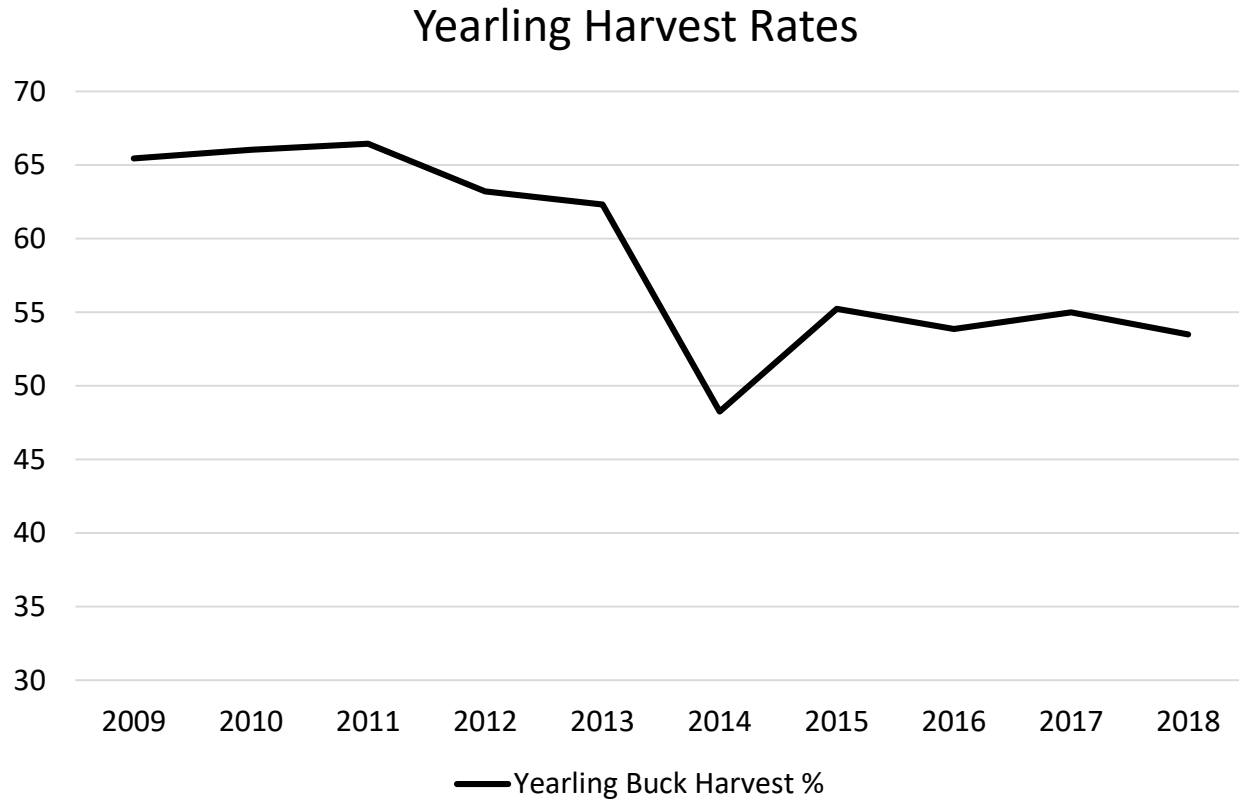
At the end of the project (Fall 2023), the results along with conclusions and management recommendations will be presented to the NRC and interested stakeholders. Recommendations will include the efficacy of APR regulations as a tool for managing the prevalence and spread of CWD.

**PROJECT DURATION:** Data collection will begin before enacting APR regulations (estimates of deer herd composition with sampling occurring in summer 2019) and 3 years post APR regulation implementation (deer herd response to APR regulations in effect for 2019, 2020, and 2021 hunting season with sampling occurring during summer 2020, 2021, and 2022, respectively). Final data analyses and report writing to be completed by 30 September 2023.

# **CWD APR Experiment**

# APR Experiment

- Check station data (5 county):



# APR Experiment

- CWD Surveillance data (17-18 Montcalm/NE Kent):

Male	Not Detected	Positive	Apparent Prevalence
0.5	422	0	0%
1.5	2,227	22	0.98%
2.5	1,168	24	2.01%
3.5+	849	13	1.51%

Female	Not Detected	Positive	Apparent Prevalence
0.5	404	1	0.25%
1.5	741	7	0.94%
2.5	875	12	1.35%
3.5+	1,651	20	1.20%

# APR Experiment

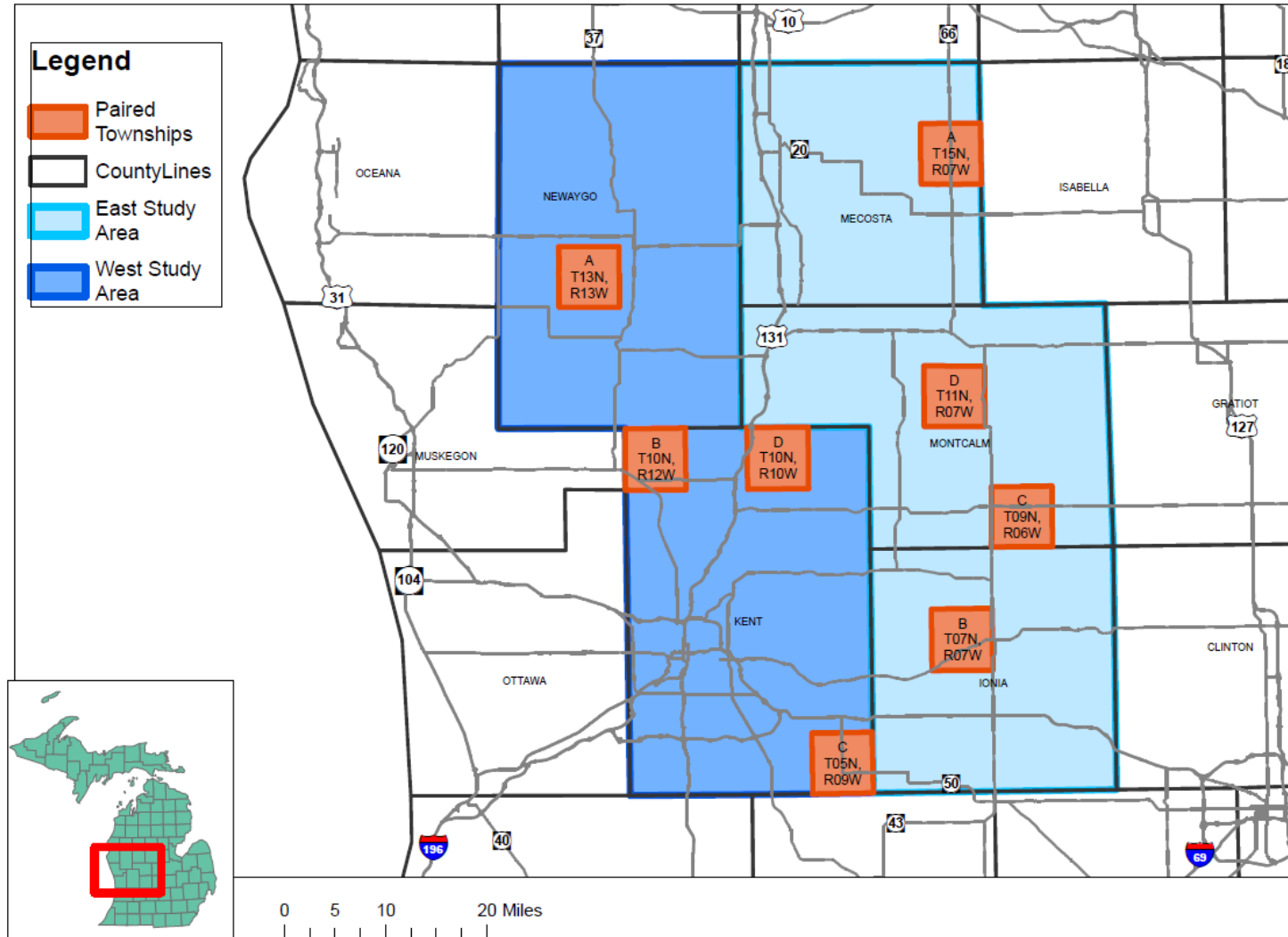
- Task:
  - To evaluate APRs within 5 county CWD Core on prevalence and spread of CWD, increasing antlerless harvest, decreasing deer populations, beginning with the 2019 season
- Objective:
  - To evaluate if APRs within 5 county CWD Core impacts deer abundance and sex/age composition

# APR Experiment

- Who:
  - Researchers within DNR Wildlife Division and Michigan State University's Boone and Crockett Quantitative Wildlife Center

# APR Experiment

Selected Paired Townships and Study Areas



# APR Experiment

- Design:
  - Townships paired by landcover, land ownership, and surveyed CWD status
- Methodology:
  - Unbaited, motion activated cameras placed in grid across township from July-September, 2019-2022



# APR Experiment

- Data Collected from Field Work:
  - Abundance estimates
  - Sex/age composition (Fawn, Doe, sub-legal APR buck, legal APR buck)
- Data Collected Traditionally:
  - Hunter perceptions of APRs (through survey)
  - Estimated deer harvest
  - License sales
  - Estimated hunter numbers

# APR Experiment

- Data NOT collected from this project:
  - Prevalence
  - Spread
- Project Deliverables Summary
  - Can provide estimates on abundance, sex/age ratio changes, deer harvest, hunter numbers, and hunter perceptions of APRs
  - Can not provide estimates on prevalence and spread of CWD

# APR Experiment

- Timeline:
  - Decision set for July 2019
  - Prior to that, staff must:
    - Order/encrypt cameras
    - Finalize budget and mobilize funding
    - Post, interview, and hire technicians
    - Obtain access for camera placement
    - Procure equipment (SD cards, locks, vehicles, etc)

**Thank You**

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